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THE REGULAR SESSION will commence on Wednesday, October 3d, 1877, and end about the 1st of March, 1878.

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THE COLLEGIATE YEAR is divided into three Sessions:—A Preliminary Session, a Regular Winter Session, and a Spring Session.

THE PRELIMINARY SESSION will commence September 19, 1877, and will continue until the opening of the Regular Winter Session. It will be conducted on the plan of that Session.

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THE SPRING SESSION embraces a period of twelve weeks, beginning in the first week of March, and ending the last week of May. The daily Clinics, Recitations and Special Practical Courses will be the same as in the Winter Session, and there will be lectures on Special subjects by the Members of the Post-Graduate Faculty.

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The REGULAR TERM will open March 5, 1878, and close the last week in June following.

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Original Communications.

Three Cases of Pelvic Abscess.

BY THEODORE A. McGRAW, M.D, PROF. OF SURGERY IN DETROIT MEDICAL COLLEGE.

The following cases illustrate the principles of treatment of abscesses in the tissues immediately surrounding the womb.

I. N., a girl, 16 years of age, came under my charge last September in Harper Hospital. She had always borne a good character, and her trouble had been referred to taking cold at the menstrual period. She had been ill for more than a year, with pelvic pain, disordered menstruation and spinal tenderness. She had constant inclination to pass water, and pain during micturition. A purulent discharge from the vagina, at times very profuse, seemed to indicate the presence of an abscess. Digital examination revealed a swelling situated in the anterior aspect of the vagina. When a catheter was passed into the bladder, the finger in the vagina could detect a great thickening of the vesico-vaginal septum—no orifice could be discovered through which pus discharged from the tumor into the vagina, though

an exploring needle thrust into the swelling, showed the presence of pus.

I cut into the abscess, let out the matter, and put in a drainage tube of India rubber. This occurred on September 10th, 1876. The tube slipped out at the end of ten days, and the abscess seemed to be nearly healed. The pus collected again and required re-evacuation. This was done on October 27th, and a new drainage tube, prepared by Dr. Longyear, the House Surgeon of Harper Hospital, so as to be self-retaining, was inserted. On June 22d, 1877, she was discharged, cured of her trouble.

Mrs. R., aged 47 years, and the mother of three children, entered Harper Hospital in May, 1877. She had suffered for nearly two years from an abscess in the pelvic tissue between the womb and rectum. In October, 1876, her menstruation had taken place for the last time. She was complaining bitterly of bearing down pain, of irritability of the bladder, difficulty in evacuating the bowels, and general pelvic distress. The abscess had, at one time, discharged through the vagina, and there was, when I examined her on May 30th, a sinus still existing, through which a small quantity of pus was discharged. This sinus ran anterior and immediately adjacent to the rectal wall. A probe in the sinus and the finger passed high up into the rectum seemed to be separated from each other by mucous membrane only. Anterior to the sinus there was a large tumor, continuous with the posterior wall of the uterus.

An exploring needle having shown the existence of pus, I plunged a bistoury into the swelling between the orifice of the sinus and the uterine wall, the patient lying upon her side and face and Dr. Boothey holding a Sims' speculum in the vagina. I was horrified on withdrawing the knife to notice, bubbling from the wound, a large quantity of offensive gas. The immediate inference was that the knife had entered the bowel. This proved, however, not to be the case. The wound was entered with a catheter, and a large quantity of offensive pus discharged. The gas had evidently penetrated into the abscess through the old sinus, which communicated with it, and permitted a slight

escape of pus. It had then, as the woman lay on her side, floated on the top of the fluid, and had first escaped after the incision. The patient was immediately relieved of her bad symptoms, and began rapidly to recover and gain in flesh.

Drainage tubes were inserted and retained until the abscess had healed from the bottom. Menstruation returned in the latter end of June, and she left the hospital on June 28th, to remain, I trust, permanently well of her trouble.

In both of these cases chills and hectic fever were present until the abscesses had been opened and a free channel secured for discharge, and then disappeared. These cases illustrate the advantage of drainage tubes in the treatment of these troublesome and tedious varieties of abscess. A simple incision for the purpose of evacuating the contained pus, will rarely cure a large pelvic abscess. The organs are so movable and the tissue so lax that it is difficult to make an incision so large or so dependent as to secure complete and constant drainage. This may be done, however, by tubes of India rubber, secured in place, and left until healing has been nearly accomplished.

The third case was one of different character. Mrs. G., a German woman, thirty years of age, had been married several years but had no children. About the middle of January, 1877, she was seized during her menstrual period with severe cramps in the lower part of the abdomen. They passed away in a few hours, but recurred during the next night. For six weeks thereafter she was continually seized with periodical attacks of pelvic pain, which occasionally would extend the whole length of the right lower extremity. She lost appetite and courage, and after seeking relief in vain from several physicians, finally placed herself in my hands.

After keeping her under observation for a few days, and satisfying myself by repeated trials with quinine, arsenic and salicine that the periodical pains were not due to malarial poisoning, I made a thorough examination of her pelvic organs. There was no abdominal tenderness on external pressure, but external pressure combined with digital examination revealed a small, hard tumor on the right side of the womb, apparently not

more than two inches in diameter, which was painful when grasped between the two hands. The uterus was freely movable, the tumor moving with it. The uterine sound revealed normal dimensions of uterine canal. I called Dr. Jenks in consultation. He differed with me in diagnosis, as he was disposed to regard it as a circumscribed abscess forming in the peritoneal sac, while I looked upon it as an inflammation of the cellular tissue between the folds of the right broad ligament. Luckily no opportunity was given to verify diagnosis by an abduction. Anodyne suppositories and medicines were prescribed to relieve pain, while the patient could be kept under observation. Nothing, however, seemed to give relief from the ever recurring cramps and pains. In the morning she would be quite easy, but about 4 P. M., the distress would begin, and not cease during the entire night.

Finally, on May 1st, the swelling growing neither larger nor smaller nor softer, assisted by Dr. A. M. Hawes, I put the patient under ether, and placed her on the left side and face in order to use a Sims' speculum. I fixed the womb with a tenaculum, and, guided by the fore finger of the left hand, thrust one of the smallest sized aspirator needles into the tumor. A drop of pus followed, but only a drop, and the aspirator was powerless to draw more. On the withdrawal of the needle, I discovered that the swelling had suddenly collapsed, the hard, circumscribed tumor having given place to a soft, illy defined tumefaction. I thrust a larger needle through the same puncture and succeeded in getting about a tablespoonful of pus. All operative procedures were then discontinued. The patient was put to bed, and for the next two weeks suffered severely from an intense inflammation of the bowels. Recovering from this, she found herself free from her old pain, and is now well. This case was remarkable from the peculiar persistence of symptoms without any evidences of a tendency in the abscess to grow or to discharge, from the injury following the puncture of the swelling by the smallest sized needle in my case, and by eventual recovery after a renewed inflammation had excited fears of a reaccumulation of pus.

I am inclined to account for the symptoms following the puncture by the assumption that the abscess was between the folds of the broad ligament, and that the needle, before entering it, passed through a pouch of the peritoneum. The discharge of pus through the puncture would necessarily cause a peritonitis of a more or less severe grade. It might also be explained on Dr. Jenks' theory that the abscess occupied a pouch of the peritoneum, and that the needle was inadvertently thrust too far, passing through the abscess and making a passage into the, as yet, unaffected perineal cavity beyond.

I do not think, however, that this theory is correct, for I use the aspirator, in such cases, in such a way that the fluid is drawn into the needle the moment it enters the cavity in which it is contained, and I cease to advance it when that object is attained.

Exsection of Hip Joint and Subsequent Amputation of Thigh.

REPORTED AND READ BEFORE THE FULTON COUNTY MEDICAL SOCIETY BY A. J. MURBACH, M. D.

Johnny Keller, of healthy parentage, aged 12 years, was taken with severe pain in left hip joint and fever, in October, 1875, and was treated for acute and every other form of rheumatism by Drs. Sneer and Clover (Eclectics), of Stryker, Ohio, without any good result.

I saw the case first in June, 1876, and found all the symptoms of morbus coxarius, about entering the third stage. The limb was greatly flexed at both the hip and knee joints. Anchylosis of hip joint was complete, though but fibrous, limb adducted, pelvis raised and projecting backwards, etc.

His general condition was bad, anæmic and emaciated, muscles flabby, and his appetite was poor.

I first put him on general tonics, such as iron and quinine, cod liver oil, nourishing diet and out door exercise, all of which

was kept up most of the time until at present, so far as practicable.

In the latter part of August I proposed subcutaneous division of the flexor muscles or their tendons and application of Prof. Sayre's short splint, in order to get extension of the limb, but when the splint arrived, an abscess pointed on the posterior aspect of thigh, which made its application very painful, and had to be abandoned. This was about the first of October, and from this time on, abscess after abscess formed, and in the early part of the winter I proposed to make exsection of the diseased joint, but could not get permission.

The same general treatment was persistently kept up and the sinuses syringed daily with diluted nitric acid, and also sol. mur. ammonia.

The boy was gradually running down, and in the spring it was quite apparent that he would ere long succumb from the constant drain on the system, and the parents finally consented to have an operation performed.

So on May 4th, with the assistance of Dr. H. M. Schuetzler, of Toledo, and Dr. N. Stubbs, of Stryker, Ohio, I removed the head and upper half of shaft of femur, following Prof Langenbeck's method for the operation. After removing the head and neck, then trochanter major and minor, we found that the femur was involved in its entire length, and removed the upper half. Amputation was now indicated, but as the patient was failing in strength, though he had lost but little blood, we did not dare to inflict any further shock, and concluded to postpone the operation.

I next gouged out the carious bone on ileum and acetabulum, dressed the wound in the usual manner, and placed his limb on a hammock of a double inclined plane of our own construction.

He recovered from the effect of chloroform in due time, and took stimulants and morphia.

Dr. W. Stubbs and I saw him next day, 9 o'clock, A. M., and found that he had fairly recovered from the shock, had some nausea, had taken short naps through the night, not much

pain when quiet, wound looking well, pulse, 100, temperature, 98½°. May 6th, 9 o'clock, A. M., not much pain, eats some, pulse 115, temperature, 99½°. May 8th, 9 o'clock, A. M., sleeps good, eats, does not complain of much pain, pulse, 120, temperature, 99½°. May 11th, 9 o'clock, A. M., eats good, not much pain, pulse, 124, temperature, 102°. Bowels moved by enema. Wound discharges freely of healthy looking pus.

From this time on his general condition improved, and without any unpleasant symptom his pulse and temperature gradually becoming normal and the wound healed rapidly, until May 30th, he became feverish, had pain in knee and along the course of remaining portion of femur, and a large quantity of ichorous pus discharging.

These symptoms grew worse until June 2d, when I, with the assistance of Dr. N. Stubbs and Dr. Bennet, of Evansport, amputated the limb a little above the bifurcation of femoral artery. In order to save all the blood possible we applied Esmarch's bandage, whereby we controlled the hæmorrhage perfectly.

The amputation was made by the circular method, and the stump simply closed by a couple of strips of muslin brought over it and a bandage applied over them.

June 3d, 1 o'clock, P. M.; reaction is complete, slept some last night and this forenoon, though he took but one dose of morphia after operation, and declares that he feels good. Pulse, 112, temperature, 98½°. June 5th, 9 o'clock, A. M.; eats some, no pain, wound discharges reasonable quantity of healthy looking pus; pulse, 128, temperature, 99¼°. June 7th, 9 o'clock, A. M.; general condition good, appetite good. And thus the case progressed favorably from day to day, and on the 15th of Jund got off his bed alone and walked across the floor on crutches, and June 19th, when I saw him last, the stump had nearly healed, as also the sinuses that had existed before the operation, and to day, June 29th, it is completely healed up, and Johnny is gaining in flesh and general health.

Report upon Obstetrics.

A PAPER READ BEFORE THE DETROIT MEDICAL AND LIBRARY ASSOCIATION, BY DR. EDWARD W. JENKS.

The subject of my paper being assigned me and its length limited by the rules of this Association, it cannot be expected that I am able to give more than a very meagre report of what has been done in the obstetric world during the past year; nor shall I attempt to do more than merely allude to a few of the more practical points that have attracted attention, and which concern each of us engaged in the practice of obstetrics.

Of late the obstetric forceps, the indications for their use, the manner of using them, the kinds, and their value as compared with other obstetric procedures, have been freely discussed in medical societies and through the medical journals at home and abroad. The late Prof. Meigs made the statement that the forceps was not a pincer but an extractor. In a paper left unfinished by Prof. Hugh L. Hodge, completed by his son, and published in the *American Journal of Obstetrics*, May, 1875, exception is taken to this assertion of Meigs' as tending to restrict the practical uses of the forceps. The author claims that in narrowed pelves the fœtal head may be compressed by the forceps so as to deliver the child alive, and denies the assertion commonly made that the death of the fœtus occurring during labor is due to pressure on the brain; the brain of the fœtus is of no use, as seen in acephalous monsters, as children often survive after prolonged and severe pressure upon the cerebral mass, provided there is no rupture of tissues or an extravasation internally. If, however, the placental connections be severed for a period exceeding five minutes, the life of the fœtus is destroyed. This may be effected by various means. There can be no question that continuous pressure upon the head may produce extravasation, and safety to the child can better be insured by intermittent than continuous pressure upon body and head, and when the placenta is detached the only hope of the child's life is in speedy delivery.

As between version and forceps, this author gives his opinion decidedly in favor of forceps, holding that where the conjugate diameter is at least three inches, "delivery by suitable forceps is far more safe for the mother, and that the mortality for the child would be less."

Hodges further claims that the obstetric forceps, if well constructed, is the best extractor for dead children also, in case of craniotomy. The cephalotribe, which is a modified obstetric forceps introduced into practice by the younger Baudelocque, "should be considered the greatest improvement in operative midwifery since the seventeenth century."* Valuable statistics and practical deductions to obstetricians have been obtained from the reports of the Rotunda Lying-in Hospital, of Dublin. The annual report of the late Master, Dr. G. Johnson, as showing the forceps to be important conservators of life and health to mothers and children, has deservedly attracted much attention. Dr. Mann, in his 'Report on Obstetrics," in the *American Journal of Obstetrics*, for January, 1877, has summarized a portion of this report so admirably that I quote it at length. "He (Dr. Johnson) is able to show a very low death rate; fifteen in twelve hundred and thirty-six cases, only seven of them, or one-half per cent., being from strictly puerperal causes. This he attributes in great part, to the practice of interfering to prevent the labor being protracted, thus preventing the evil consequences arising from exhaustion and long continued pressure on the soft parts. The method of interfering was generally the *application of the forceps*, and this was done, not only in cases which would be ordinarily considered as proper for this operation, but in a large number of cases (forty-two) *where the os was only partially dilated*, but dilatable. This method of operating, entirely opposed, as it is, to the generally received teachings on the subject, deserve our careful attention, as being one of the most important advances which have been promulgated within the time of our report; true, it is not entirely new, but Dr. Johnson is the

*Mann, Report on Obstetrics for 1875-6. Amer. Jour. Obstet., Jan., 1877.

first to report a sufficient number of cases, and to give rules of proceedure to place the operation on a sound basis.

The degree of dilatation varied in his cases; assuming four inches as the degree of dilatation for the head to pass, in twenty-four cases it over two-fifths dilated; in twelve it was three-fifths, and in five, four-fifths. The condition which renders the interference advisable, are, first, early escape of the liquor amnii before dilatation of the os, thereby allowing the fœtal head to press injuriously upon the soft parts of the mother. Another condition is the descent of the head directly upon the cervix, without the intervention of the bag of water, the result being the same in both cases. In one case prolapse of the funis, and in another placenta prævia were considered conditions warranting the operation. The position of the head varied; in eleven instances it was above the brim; in seventeen in the brim, and in fourteen within the cavity of the pelvis.

Dr. J. has now operated in one hundred and thirteen cases and has never failed, thus certainly demonstrating that our old ideas as to the applicability of the forceps are destined to undergo a change. It probably will not soon become common practice to apply forceps in every case of labor tedious in the first stage. Still, as Dr. McClintock remarks, it is a great consolation to know that when the head is high up in the brim and the os not fully dilated, should any emergency arise demanding immediate interference, we may have recourse to the forceps with probable safety to both mother and child."

In Playfair's admirable work on obstetrics, published in the United States during the past year, is a very careful discussion upon obstetric operations. This author is an advocate of the early and more frequent use of the forceps than is customary in Great Britain, and recommends their application even to the extent carried out by Dr. Johnson, in the Rotunda Hospital. With reference to the effects of early interference as to the life of the child he makes a forcible comparison between the general mortality of one out of every twenty or thirty children and the results obtained by Dr. Hamilton, of Falkirk, who used forceps

on an average once in every seventh or eighth case, and delivered 731 successive children without a single still-birth.

At the last meetings of the Michigan State Medical Society and the Obstetric Section of the American Medical Association, the uses of the obstetric forceps were discussed; in the latter society the discussion was participated in by many who are acknowledged as authority on subjects pertaining to obstetrics and gynæcology. At neither society were there any important statistics of American obstetric practice exhibited, but individual experiences and views were presented, all tending to show the life conserving power of the obstetric forceps in skilled hands. Your reporter is convinced that among skillful American obstetricians the custom prevails of having recourse to the forceps fully as often, with the same conditions, as they have been used by the Dublin obstetrician and his followers; and his statistics are none the less valuable, inasmuch as they show the views of their compiler and at the same time reflect the opinions of the best obstetricians of our day.

As apropos to the subject of the use of forceps it may be well to add a word as to the kinds. Your reporter has long maintained that it matters but little what particular pattern of forceps the obstetrician uses if he has a sufficiently strong pair and is skilled in their use. This assertion, while believed to be true if taken in its broadest sense, may require a certain amount of qualification. It is, however, based upon the fact that most of the forceps now used are modifications of the Baudelocque instrument. I would exclude from the obstetricians' armamentarium the small, straight forceps that are of no use except to ornament the cases of our surgical instrument makers. Some of the smaller forceps having the pelvic curve may be serviceable when applied in the inferior strait, but seem to possess no mechanical advantage over the larger instruments.

Prof. Tarnier, of Paris, has lately invented a new obstetric forceps which has attracted considerable attention and criticism. He enumerates several defects in the common long forceps, as follows: 1st. That they never permit the operator to make traction to the axis of the pelvic canal. 2d. That they do not

leave the fœtal head sufficient mobility to allow it to follow freely the curve of the pelvis. 3d. That they are not provided with any indicator to show the accoucheur in which direction he ought to make traction.

The forceps of Tarnier, of which the accompanying diagram* will give you some idea, seems to be a complicated instrument, and yet it is quite simple in construction. It consists of two parts; first, a pair of prehensile branches, which resemble ordinary forceps, except that the handles are curved backwards so that their extremity lies in the prolonged axis of the blades—that is to say, in precisely that axis of the pelvis in which traction ought to be made. These are not used for traction, but simply grasp the head, and are held together by a screw. The second part consists of two traction rods, which are articulated freely at a joint near the lower part of the fenestræ and in the axis of the blades. These are not crossed but parallel; they have the same curve as the prehensile branches, lie close beside them when in position for traction, and end in a strong transverse handle, which gives a powerful hold to the hands. Each traction rod is introduced, together with the corresponding prehensile branch, and the adjustment is said to be as easy as with the ordinary forceps.

Prof. Tarnier claims for this instrument in contradistinction to the ordinary forceps, the following qualities: 1st. That it permits the operator always to make traction in the axis of the pelvic canal. 2d. That it leaves the fœtal head mobility enough to allow it to follow freely the curve of the pelvis. And 3d. That it provides an indicator which shows the accoucheur the precise direction in which at any moment he ought to make his traction. This instrument can only be conveniently applied with the woman in the dorsal position, and therefore does not meet with very favorable opinions by the leading British obstetricians.

Prof. Pajot has severely criticised the instrument in the *Anales de Gynécologie* for March, and Prof. Tarnier replied in

*In Annales de Gynécologie, March, 1877.

the April number of the same journal, giving a better description of the mechanism of the instrument, and the manner of its use and advantages over other instruments than in his first memoir. "The Obstetrical Journal of Great Britain and Ireland" says that as regards its shape we think that this form of forceps is well worthy of the attention of British obstetricians. Your reporter is of the opinion that the name of the distinguished inventor of itself entitles the forceps to consideration aside from their intrinsic merit; and further that their trial by a number of obstetricians will be quite liable to prove much that is claimed for them when they are applied to the fœtal head within or above the pelvic brim.

At the meeting of the American Gynecological Society held in Boston, in June last, Dr. Skene read a valuable paper upon "The Principles of Gynecological Surgery Applied to Obstetric Operations," in which he called attention to the facility with which craniotomy could be performed by the aid of Sims' speculum; also to the aid afforded by means of the speculum in applying Dr. Thomas' method of treating prolapsus of the funis. A case was related in which the cord was pushed back by means of sponges, held in long holders through the speculum, and with greater ease and better results than when the cord was reduced in the manner recommended and ordinarily employed. He suggested the use of the same means in the treatment of arm presentation, pushing the presenting part back by means of the sponges through the speculum. Reference was made to cases where Barnes' dilators were introduced through the speculum with greater facility than could be done otherwise. The doctor also mentioned what he had previously stated of the advantages of the speculum in introduction of the tampon and in removing the ovum in retarded abortion. Your reporter for several years has made use of the speculum for the purpose of introducing the tampon and for removing the ovum in retarded abortion by means of an ovum forceps or scoop, and fully agrees with Dr. Skene in the advantage of the practice he advocates over the older methods.

In the discussion which followed the reading of this paper

Dr. Lusk remarked that when the cephalotribe was used it was preceded by perforation, and when the cranioclast was used it was necessary to disarticulate the bones of the head before the instrument was applied, and in both of these operations he could understand how the suggestion made by Dr. Skene would be of value.

In cases of deformed pelvis the old practice of exviscera-tion, amputation, or long continued intra-uterine manipulation of any kind is attended with so much risk to the life of the mother that leading obstetricians seem to favor a revival of the old operations of Cæasrean section, and *gatsro-elytrotomy* in many cases, with a probability of saving fœtal life in some instances, and attended with no greater, but even less danger to the mother. That these latter operations should not be performed where cephalotripsy or cranioclasm can be easily done is a matter of question, but in mal-presentations the long and sometimes fruitless attempts at version where mutilation of the child becomes necessary, especially in a narrowed pelvis, the danger to the woman's life is fully as great in many instances as from *gastro-elytrotomy* or even the Cæsarean section.

Your reporter has recently had a successful case of Cæsarean section in consultation with Drs. Flintermann and Torrey, where the woman made as good a recovery as could be asked for, with no more apparent trouble after the first twenty-four hours succeeding delivery, than attends the easiest of child-births. The details of this case he does not desire to repeat in this connection, as they will be given fully elsewhere, simply adding that the occasion of the operation was a deformed pelvis, the conjugate diameter of the superior strait being but two inches, the presentation of the fœtus was the right shoulder; version proved to be impossible or any other intra-vaginal obstetric operation for the delivery of the child, owing to the angularities of the parturient canal and want of room produced by the narrowing at the brim of the pelvis. *Gastro-elytrotomy* might have been performed in this case, but it was thought best, owing to the mal-position of the child and the many days she had been in labor, to make Cæsarean section, with but little expectation

of her recovery. The writer attributes the woman's recovery, in a great measure, to the absence of intra-uterine manipulation preceding the operation.

The operation of *gastro-elytrotomy* has been revived by Dr. Thomas, who was not successful in his first case in saving the life of the mother, but delivered the child alive. Dr. Skene has been successful in two cases, the last one very recently, in saving both mother and children. Dr. Thomas' patient was moribund. It is too frequently the case such an operation as this or the Cæsarean section is not proposed until the woman is exhausted by long continued labor and the previous attempts at delivery.

Gastro-elytrotomy is so new a procedure that statistics concerning it are exceedingly limited, but theoretically it is a simple operation and promises far more in its results than the Cæsarean section or even cephalotripsy. It consists in making an incision just above and parallel with Poupart's ligament from the symphysis pubis to the anterior superior spine of the ilium, holding back the peritoneum as in the operation for ligature of the iliac arteries, opening the vagina at its junction with the cervix, and extracting the child by version.

The uses of anæsthetics in parturition is as yet a somewhat unsettled question. There is no question about their advantages in the more serious obstetric operations, but only with reference to their use in the simpler forms of labor are their any differences of opinion. There have not been many important papers published during the past year by either American or British obstetricians, but in the French medical societies there has been considerable discussion, which has been summarized in the medical journals of Paris. In the *Revue des Sciences Médicale* for April, 1877, is a brief synopsis entitled "*De l'emploi des Anesthésiques dans les Accouchments*, par Blot, *(Soc. de Chir.*, p. 691, 1876.) of which the following is a translation: "One does not know how to say enough against the baneful employment of anæsthetics in obstetrics, and it is important to establish rules for its indications. M. Blot reports the case of a primipara in which the intolerable neuralgic pains and the retraction

of the cervix uteri under the influence of these pains, yielded to an incomplete anæsthesia from chloroform. He cites another case where the extreme violence of these pains had interrupted labor, and where chloroform permitted the accouchment to terminate rapidly.

Polaillon admits, with Blot, that anæsthesia is rarely indicated; thus with eighteen women he has tried rectal injections of hydrate of chloral, and has observed that in the great majority of cases labor was prolonged; the head rested upon the vulva, the child was in danger, and it was necessary to terminate labor by the forceps. Lucas, Championière, Polaillon, and Perrin remarked that an incomplete anæsthesia is sufficient, and may be produced by a few drops of chloroform, in order to diminish the pain, stop the spasmodic condition and rapidly terminate labor. It seems, then, that chloroform acts as an antispasmodic and not as an anæsthetic; an essential difference which separates obstetrical anæsthesia from surgical anæsthesia. In the first the remedy acts upon the genital organs and calms the pains without disturbing the sensibility or intelligence; in the latter the suppression of sensibility arrives only in the second period, and is generally preceded by the abolition of intelligence."

At the last meeting of the American Gynecological Society Dr. Lusk, of New York, read a valuable and instructive paper entitled, "On the Necessity of Caution in the Employment of Chloroform during Labor,*" and submitted the following propositions: 1. Deep anæsthesia carried to a point of complete abolition of consciousness, retards and sometimes suspends uterine action. It was that fact that made it so valuable in many cases, but safety required that the patient should come partially from under the influence before complete delivery was effected in order to avoid hæmorrhage.

2. Chloroform, even when given in the usual obstetric fashion, might, in exceptional cases, so far weaken uterine action as to create the necessity for ergot and the forceps.

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*Vide Amer. Jour. of Obstet. for July, 1877.

3. Patients in labor do not enjoy any absolute immunity from the deleterious effects of chloroform. Cases were related.

4. Chloroform should not be given in the third stage of labor. Cerebral anæmia, from any cause, enhances the risk of anæsthesia.

5. The more remote influence of large doses of chloroform during labor upon the puerperal state is a subject which calls for future investigation and inquiry.

In the discussion which followed the reading of this paper Dr. Wilson, of Baltimore, remarked that the cases of death from chloroform in labor related by Dr. Lusk were the first of which he had heard. He always felt the most perfect confidence in the agent. He had used it 28 years and administered it between two and three thousand times without a single case of post partum hæmorrhage or the slightest ill effects following or attending its administration.

Dr. Albert Smith, of Philadelphia, regarded the paper as one of great interest and fully endorsed all the apprehensions expressed by Dr. Lusk regarding the use of chloroform in ordinary obstetric practice. In his own practice he employed Squibbs' ether, believing that it possessed all the advantages of chloroform and could be used with absolute safety. He employed it in ordinary cases. Yet there were cases in which a rapid and perfect loss of consciousness was desired, and under such circumstances advantage might be derived from the use of chloroform. For example, in hæmorrhagic abortion where an absolutely relaxed condition was desirable for the purpose of giving the opportunity to carry the finger instantly to the fundus of the uterus for the removal of the ovum; in such cases he always used chloroform, because for the short time the patient was under its influence, as a rule, rendered it safe."

The writer has long since decided as to his own rules of practice regarding the use of anæsthetics in obstetrics. 1st. That they may be given to the extent of producing partial loss of consciousness in any stage of labor without doing harm. 2. That complete anæsthesia, except in convulsions and the more important and painful obstetric operations, is to be avoid-

ed, as it lessens the contractile power of the uterine and abdominal muscles and thus protracts labor. 3. Even in convulsions, if there is much venosity of the su rface or imperfect respiration, anæsthetics, particularly chloroform, must be used with extreme caution. 4. Complete anæsthesia very markedly protracts the third stage of labor, and renders the woman more liable to post partum hæmorrhage. 5. Chloroform is preferable to ether, except when profound anæsthesia is required for a protracted period.

The use of "*Hydrate of Chloral in Obstetric Practice,*" is the title of a very excellent paper in the Gynecological Transactions,* by Dr. Richardson, of Boston. It seems to be well established that this drug is a valuable acquisition to our list of remedies for certain complications and morbid conditions incident to child-birth. Dr. Richardson gives a report of clinical cases in the paper in support of his views. He recommends chloral in the vomiting of pregnancy, grs. xv, a quarter of an hour before meals, or if not tolerated, grs. xxx per rectum at first, and then by the mouth subsequently. In after pains sometimes combined with ergot. As an anæsthetic during labor for the relief of short sharp pain. In puerperal convulsions this author recommends the combination of chloral with bromide of potassium. For the *insomnia* which not unfrequently follows tedious and exhausting labors "chloral in thirty grain doses will be followed by the greatest possible benefit." He does not look upon it as a perfectly satisfactory anæsthetic agent, but "as a valuable remedy for the relief of those affections of the nervous system which so frequently occur in obstetric practice, it seems fairly to deserve to be more widely known among the medical profession than it is at present."

Your reporter is able to corroborate, in the main, from his own clinical experience, the opinion of Dr. Richardson concerning the value of chloral in obstetric practice, more particularly as to its great service in lessening the intensity and aggravating character of pain in the first stage of labor; for the sleep-

*Op. Cit., p. 246.

lessness which often follows tedious and exhausting labors, and in threatened as well as existing puerperal mania. Experience of its use in puerperal convulsions has been so very satisfactory that he can speak even more positively than Dr. Richardson as to its great value. The manner of administration in convulsions has usually been from thirty to sixty grains in solution per rectum without the combination of bromide of potassium, and repeated every hour as long as required. The use of chloral subcutaneously is apt to produce suppuration. Nor can he conscientiously speak with any degree of favor of its injection directly into the veins, as recommended and practiced by some French physicians. It can be introduced into the system safely only by the mouth or by the rectum.'

The causes, prophylaxis and treatment of puerperal diseases have found a prominent place in recent obstetric literature, to such an extent that they can scarcely be alluded to in this report, as it has already exceeded the time allowed under the rules. The readers of medical journals are doubtless familiar with the important discussions which have recently occurred in the London Obstetrical Society upon the subject of puerperal fever. Dr. Fordyce Barker, of New York, in the discussion of July, 1875, stood almost alone in the society in defence of the theory that puerperal fever is a distinct and specific fever attacking puerperal women only. Many who had heretofore held similar views seem to be more inclined to the opinion expressed by Dr. Priestly, that puerperal fever is simply a blood poisoning, a septicæmia such as is observed in other than puerperal patients, modified, perhaps, by the peculiarities of the system in a puerperal state, but still not constituting a separate pathological genus, as the origin of the poisons is either autogenetic in the patient's own system or heterogenetic, imported from without, the auto-infection or hetero-infection of Schrœder. In the first the poison is disorganization, or death of tissue—as a piece of placenta, dicdua or blood clot retained, or some laceration in the parturient canal may be either the seat of decomposition or absorption. As to the hetero-infective form of puerperal fever the question arises, whence comes this poison?

Of the contagiousness of puerperal fever there can at this day be no question, but if we class the two former mentioned under the one head of puerperal fever, we may with propriety ask if the auto-genetic and hetero-genetic are equally contagious? In the preface to the voluminous work of Hervieux[1] occurs the following: *Un mot, un seul mot, avait suffi pour dissiper toutes les obscurités qui enveloppaient cette question si ténébreuse et en apparence si complexe des épidémies puerpérales. Ce mot est*: POISON *Il y a un poison puerpéral, donc il y a un empoisonnement puerpéral.*[2]

Among recent authors opposed to the doctrine of a specific poison giving rise to puerperal fever is Winckel, whose work on CHILD-BED, translated by Dr. Chadwick and published in this country, is deserving of careful study.

At the last meeting of the Michigan State Medical Society, Dr. Wade, of Holly, read a carefully prepared and ingenious paper upon Puerperal Bacteræmia, iu which he claimed, as well as I can remember, that bacteria were the chief factors of all forms of puerperal diseases. This is a question which must remain unsettled until the part of bacteria in the production of any kind of disease is better understood.

There are some problems still unsolved concerning the pathogenesis of puerperal diseases, which have been merely alluded to. Your reporter confesses that he is quite disinclined to leave thus abruptly this great and important subject of puerperal diseases without further discussion of some of the questions which have arisen and been ably discussed in the obstetric world during the past year or two. The subject seems almost exhaustless, and yet is fraught with the deepest interest. Of greater importance, however, than the pathology of puerperal diseases, or even their treatment, is their prophylaxis; this should be the end and aim of all our inquiries. Our duty as obstetricians is to guard our patients by every means in our power (which I cannot now discuss) against the noxious influence of poisons from within and from without, whether septicæmic or the product of contagion.

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1 Hervieux Traité Clinique et Pratique des Maladies Puerpérales Suites de Couches, Paris, 1870

2 A word, a single word, should suffice to dissipate all the obscurity which envelopes this dark and apparently complex question of puerperal epidemics. This word is *poison*. There is a puerperal poison, therefore there is a puerperal poisoning.

Abstracts from Virchow's Archives.

PREPARED FOR THE DETROIT MEDICAL JOURNAL BY H. P. V. PETERSHAUSEN, A.M., M.D., PH. D.

VIII — *On Sarcoma of the Lymphatic Glands. (Dr. Raissa Putiata, of Moscow, Vol. 69, Feb. 1875.)*

Not long ago two different affections were termed "Lymphosarcomata," though they differ widely in their anatomical character. They are: 1. The sarcoma proper of the lymphatic glands, in which the tissue assumes the character of embryonic connective tissue while the normal lymph-corpuscles lose their normal type, and 2. The lymphoma, a simply hyperplastic growth of the glands, sometimes limited to their reticulum, sometimes affecting the lymph-corpuscles. This form is known as lymphosarcoma.

The sarcoma proper is a very rare affection, of which the author was happy enough to observe several cases. In one of them the tumor developed from the walls of the blood vessels of the gland, in addition to which, during the later stages, there followed a new growth of connective tissue terminating in an alveolar carcinomatous formation. The primary diseased glands were situated in the left axilla. The first changes noticed consist in a hyperplasia of the lymph corpuscles whose form and size were still remaining. The blood vessels became dilated and their walls hypertrophied. Next, the cells enlarged, became rich in protoplasm, changed their form to a polyedric one, and increased the number of their nuclei. The reticulum decays then and the connection between the single cells gets very loose. The lymph corpuscles have then all disappeared.

The peculiarity of this tumor is that its cells appear as adventitial cells of the vessels. Similar tumors were found by others in the pia mater (Waldeyer's plexiform angiosarcoma).

In one place the tissue of the tumor resembles pretty much carcinomatous tissue.

This affection appears to have been a very malignant one, as death followed about eighteen months after the tumor was first observed in the axilla, which had also caused metastases in the lungs, liver, ovaries and peritoneum.

The author found in another case the reticulum of the gland to be wide mashed, the cells enlarged and polyedric. These changes were noticed in the middle (medullary) part of the lymph-follicles to the hilus. Somewhat later central fissures appear in the medullary part which afterwards become connected with those peripheral lymphatics of the capsula which remained intact. Therefore, those fissures must be considered as lymphatics, as their contents consist of lymph-corpuscles. A further change of the elements of the tumor is that into connective tissue.

In case of secondary sarcoma in the lymph glands the author found that its development is similar to that of secondary carcinoma. He examined only the melanotic sarcoma of the inguinal glands for this statement.

IX.—*A Case of Mixed Osteoid Enchondroma of the Lung. (Dr. A. Lesser, in Berlin, Vol. 69, March, 1877.)*

The author found a tumor about five inches long and from one to two inches broad, in the lower lobe of the left lung of an old woman who died 78 years old. It was lobulated, some of its lobes had only a loose connection by connective tissue with the main part. Those parts of the tumor which were of a light yellow color had a consistence of cartilage, while the more honey colored parts had a bony consistence. The tumor had a connective tissue capsule, and around it there was a broad layer of compressed lung tissue. The bronchial glands were in an inflamed state.

By the microscopical examination it was made probable that the peribronchial tissue was the matrix of the tumor. In different portions of this there were found between *amyloid*

masses, hyaline cartilage, fibrous cartilage, osteoid tissue, bony substance, marrow, and medullary substance. The author did not decide, if the degeneration in the tumor was produced in loco, or if it had any relation to syphilis, of which traces were found in the vagina and liver.

X.—*On Hydræmia and Hydræmic Œdema. (Drs. J. Cohnheim and L. Lichtheim, in Breslau. Vol.* 69, *Jan.* 1877.)

About half a century ago R. Bright gave a new explanation of the, at that time, already known frequent coincidence between hydrops and albuminuria, as he recognised the appearance of albumen in the urine to be the symptom of a disease of the kidneys, while he considered the œdema to be the sequence of the reduction of the albumen in the blood (hydræmia).

Meanwhile, many modifications have taken place in these teachings. It became known that hydrops is not always the sequence of a kidney affection, but nobody did doubt that hydræmia really causes œdema.

Still, a number of facts could not be explained by this theory. There may be observed post scarlatina a high degree of œdema, while there is in this affection only a scanty excretion of urine, although the latter may contain a great quantity of albumen.

Moreover, we find those kidney affections in which greater quantities of albumen are excreted to be seldom combined with œdema. Besides there was observed that solutions of chloride of soda do not produce œdema when lead through localized parts of the circulatory system.

Therefore, hydræmia could no longer account for hydræmic œdema, and hydræmic plethora was now called to assistance. Barthels took part with this view (in Ziemssen Pathol. and Therap. Vol. IX, 1). But the opposite point of view may be defended with the same success.

The authors made a series of experiments to obtain a more thorough knowledge of the relations alluded to. They did not arrive at any definite results, but think that the phenomena in question may be explained as follows:

Hydræmic œdema can be caused directly by changes taking place in the walls of the vessels, especially in those of the skin. Adopting this view it will be plausible why, in spite of a serious hydræmic plethora, there is caused no œdema. This may be called forth only when the functions of the walls of the vessels are changed. Among the other causes that favor œdema there may be mentioned, venous engorgement of a low degree depending upon the influence of gravity upon circulation, and changing congestions of certain districts of vessels depending upon the action of the vaso-motors.

The connection between alterations of the vessels of the skin and hydræmic œdema seems to be more evident in case of scarlatina. Here is an affection of the skin with consecutive desquamation, to which is often added disease of the kidneys. The skin affection alone does not account for the œdema of the subcutaneous tissue, but it comes on quickly, when under the influence of a disease of the kidneys there is disturbed the excretion of urine and hydræmic plethora is called forth.

Combustions of the skin and artificial suppression of its functions, followed by albuminuria, do further prove that there is a certain relation between disease of the skin and the kidneys. It would be more difficult to find similar relations for the simple hydræmic œdema of phthisic, carcinomatous and other cachectic individuals. But in their cases, as well as in certain chronic diseases, a long continued hydræmia may at last injure the walls of the vessels themselves so that their normal functions are interfered with.

XI.—*On Metastases of Tumors.* (*Drs. J. Cohnheim and H. Maas, of Breslau. Vol.* 70, *June*, 1877.)

During the last twenty years it has often been described how a malignant tumor penetrates a vein, grows within its walls, and how such a thrombosis is followed by emboli in the capillary part of the circulatory system. Therefore, there will be found at present scarcely anybody who does not recognize the described mode as one of the means after which carcinomatous tumors may be transposed. Taking this for a fact,

there arises the question why a tumor grows from the embolus corresponding with the structure and cellular elements of the latter. This can be explained in two different ways. The cells of the carcinomatous embolus itself may produce the elements of the metastatic nodule, or they may infect the elements of the organ with which they come into contact. In the latter case a proliferation would be caused in the adjacent tissues whose product does not equal the matrix from which they arise, but the infecting agent.

Though the latter hypothesis is taken for granted at present, the authors think that it is not sufficiently supported by facts, and consider the microscopical specimens exhibited for its verification as deceiving images.

But the first mentioned hypothesis—self depending proliferation of emboli—is likewise not proven. The authors thought that this was best done by bringing live tissue into the vessels and see if it proliferates there, in which case the penetration of the walls of vessels and the farther growths outside the vessel might be easily explained. They did not try to bring pieces of fresh sarcomatous carcinomata into vessels, as all former trials to inoculate carcinomata had no success. The introduction of periost seemed to promise a better result, as it is known that it will grow if separated from its connections. Experiments were made with rabbits, dogs and chickens. The latter were best suited for the purpose. The birds were killed between the third and twenty-seventh day after the periost was brought into their jugular veins. All emboli which were found appeared as solid cylinders. Those which had been introduced over fifteen and less than twenty days were ossified. There could be found, similar as in the common thrombus, new vessels growing into the embolus, from which the place and extension of the ossification was dependent.

Based upon these facts we may now assume without hesitation that an carcinomatous embolus will grow and enlarge from itself in a similar manner, but there is no reason to believe that the wall of the vessel takes part in the growths in any other way than by the formation of new vessels from their vasa vasorum.

Those emboli which had been present in place over twenty-two days became gradually absorbed, and after the lapse of a month, hardly any traces could be found of them. This is about the same result which follows if the periost had been transplanted into subcutaneous tissue. We meet here the power of the physiological organism to carry off by virtue of its vital force all that cannot be made useful for it. In case this force should be weakened there would arise danger that transposed parts will proliferate, and others become the center of stationary nodules. Not the tumor, as such, is malignant, but becomes so when the vital force of an individuum is *reduced below its physiological standard.* As long as it is normal, the transposed elements will simply be destroyed in case of so-called benign tumors—little tumors in the mammæ, nervi, nodules in the subcutaneous tissue which had remained in place for years, with every sign of a benign tumor, commence suddenly to grow and generalize, as is observed by many surgeons. The author thinks that only a change in the constitution of the patient accounts for these facts, and they explain by their hypothesis, likewise, those strange cases in which only one kind of tissue or system becomes the seat of metastases (cancer in bone), as only there are found favorable conditions for the further development of such semina.

XII.—*On Spastic Paralysis of the Spinal Chord. (Dr. Wilh. Erb. in Heidelberg. Vol.* 70, *June and July*, 1877).

Two years ago the author published a complex of symptoms relating to disease of the spinal marrow, which he considered as being of a peculiar character. He separated, therefore, this form of disease from others of the group of affections of the spinal marrow. The first observations of symptoms belonging to the disease in question, were made by Tuerk, of Vienna, in 1856. Several years afterwards Charcot, of Paris, published some cases of sclerosis of the lateral columns, of which a few were combined with progressive muscular atrophy. Other authors did publish then similar cases. But in all instances it was a matter of question if the symptoms described

were really dependent upon lateral sclerosis or not, as hardly any post mortems were made till now. The author characterizes the disease, after having observed a considerable number of cases.

In one-half of his cases he finds the disease beginning with rheumatoid pain in the region of the sacrum and in the legs. In different places of the skin there was observed a burning pain or a sensation of cold, and sometimes formication. Motoric disturbances were constantly found, and are described as a weakness and tiredness in certain muscular regions, which hinders the patient to try a long walk, and which at last leads to paresis. Several times the paresis befell first the one leg and then the arm of the same side before attacking the other leg. Then a certain stiffness in the extremities, or spontaneous twitchings in them, or tonic spasms in certain muscles become observed. There is also noted clonic trembling in the leg when only the toes are put upon the floor while sitting.

In case the disease is developed, different degrees of pareses and paralyses will be found. But there is *no trace of ataxia, no tremor* upon voluntary movements, as in multible sclerosis. Most common is the paraplegic form of paralysis, more seldom the hemiplegic one. Contractions of the extremities are not frequently met with. Spontaneous contractions of muscles are observed in lesser degrees, tonic contractions in higher degrees of the disease. Besides these occur tetanic stretchings of the legs and sometimes clonic tremor in both legs.

The walk of the patients is unsteady; their feet seem to be drawn on the ground, and they are apt to stumble. In some cases a jumping movement of the body is observed at each step.

Another principal symptom is the increasement of the reflexes of tendons. An increased reflex of the tendon Achilles, of the biceps femoris and of the triceps above the olecranon are most frequently seen.

The sensibility is not disturbed, the skin reflexes are normal, and neither atrophy of the muscles nor functional diseases of the bladder do occur. There is further no decubitus and no disturbance of the cerebral functions to detect. In general

the disease takes only a gradual progress. The true causes of the disease are still unknown.

Though it may perform a high percentage of diseases peculiar to the spinal marrow, the predisposition to it is not often met with.

As to diagnosis, the following diseases may come into consideration: *Myelitis transversa chronica*, in which, besides motoric paralysis, there is found sensible paralysis, weakness of bladder and decubitus. The disease *does not* progress upwards. The skin reflexes may be high graded. *Tabes dorsalis* is easily recognized. Lancinating pain, sensible disturbances anæsthesia of muscular sense, disturbances in the functions of certain cranial nerves, unsteady walk when the eyes are closed, ataxia, weakness of bladder and sexual functions and the want of proper paresis and paralysis and of tendon reflexes do characterise it.

Though true cases of tabes cannot be mistaken for spastic paralysis, there are sometimes complicated cases met with. In these we may have a combination of sclerosis of the posterior columns with that of the lateral columns, especially in the later cases of tabes. *Poliomyelitis anterior chronica* is soon followed by high graded atrophy. Besides the sensibility towards the Faradaic current decreases in this affection. *Multiple sclerosis* appears often in the motoric part of the spinal marrow, and may then show the topical signs of spastic paralysis. Only the appearance of other symptoms will cause the observer to think of another disease. Among such are sensible disturbances, muscular atrophia, ataxia, tremor, disturbances of speech, nystagmas. In case that any complications follow spastic paralysis, there must be doubted that an exact diagnosis of the latter was made.

From paralysis by lesions of the *cauda equina* the spastic paralysis may be recognized by its tendon reflexes. Its progression from the lower to the upper extremities and the want of cerebral phenomena will difference it sufficiently from *cerebral hemiplegia*.

The prognosis does not much differ from that for other forms of chronic paralysis of the spinal marrow, but it seems to

be the most favorable form of them, and allows a relatively long period of life. It may be cured, or at least improved.

The author found that his patients were most benefitted by the application of a galvanic current. He applied it directly along the spine, and every two or three days to the leg. Next to this the systematic and careful use of water may be of service.

Argentum nitricum can be given internally, potass. iod., and arsen. could likewise be tried, but strychnine should be given under no circumstance, as it would further increase reflex actions.

That the patient's mode of life must be regulated is self evident.

Correspondence.

Relations of the Medical Profession to the People.

EDITORS OF DETROIT MEDICAL JOURNAL.— Herewith please find letter from Dr. Northrop, giving probable cause of a case of puerperal septic fever, and also its brief history and statement of termination. The letter is one of several received in reply to question as to connection of case of puerperal fever with one of erysipelas, both diseases having been reported as existing in same locality during the same week. It may be remarked in passing, that, so far as they go, these letters do not show such connection of these two diseases, as is frequently suggested in our medical journals, but seem to show that in the cases reported the disease was due to septic poison connected with decomposition of blood, etc. The main reason, however, why I offer this letter for publication, is because it illustrates some other points which I think should be of general interest to the profession. It is proper to state that the letter was not written with a view to its publication, but the writer has kindly consented to let me use it. The letter s as follows :

MARQUETTE, Mich., March 23d, 1877.

HENRY B. BAKER, M.D., *Sec'y State Board of Health:*

DEAR SIR.—In reply to your letter of the 13th inst., regarding erysipelas and puerperal fever, reported by me on the 3d inst., I have to state that, on the morning of Feb. 25th, I found a little patient who had suppurative inflammation of the ear with facial erysipelas, commencing with the diseased ear, which was limited to the affected side of the face, and the child recovered in about a week.

We have had erysipelas this winter, although I had not met it before since in December, as reported, and I would therefore ask to have my report of February 17th corrected; for although there was a severe case here during that and the succeeding week, I did not see it at any time, neither did the physician in charge see my puerperal patient, nor was there any intercourse between the two families, who live in opposite sides of the town.

Early in last December I was called to see Mrs. ———, aged 27, of nervous temperament, about five months pregnant with her fifth child, and found her in poor health. She had been in other hands up to this time. The pregnancy so far had been one of great suffering, severe pain, persistent vomiting, with marked anæmia, loss of appetite and rest, and failing in strength daily.

I made use of an abdominal bandage, and bromide of ammonium with entire relief of the pain and vomiting, and secured continuous rest for the night. Then followed tonics, with returning appetite and strength, and for about two months there was a season of comparative comfort, in which the patient was able to ride out, and walk to the neighbors', one and two blocks away.

After this, for a month, the patient suffered with suppression of the urine, with daily increasing evidence of uræmic poisoning, with disturbance of vision and fainting, increased anæmia, hydræmia and general anasarca.

The same condition had existed in her previous pregnancy. The urine was non-albuminous. There was continued gastric

irritation from this time, with frequent vomiting, and no inclination to make use of either food or medicine.

I used diuretics, diaphoretics, hydragogue cathartics, and hot air baths, all without benefit, and had advised the production of premature labor, fearing that the mother's life would be sacrificed by continuing the gestation, when nature, fortunately, began the work on February 21st. I was called, and found the pains regular, and ordered the frequent use of copious hot water douches to the cervix. The case progressed regularly until 3 P. M., of the 25th, when the membranes ruptured and the pains increased.

Continued severe, expulsive pains began at 9 P. M., and a fine, healthy boy was delivered at 10.30 P. M.

The secundines came away in twenty minutes. The labor was not attended with hæmorrhage, and the subsequent flowing was only as usual.

It could not be called a severe labor, although the first stage was so prolonged, and was completed without other aid or interference than the douche for two days. The mother was greatly prostrated, but rallied fairly by the next day. The kidneys had their function fully restored at once, and one quart of urine was passed within twenty-four hours of labor, showing that the suppression was due to pressure upon the renal circulation, as had been expected; and although I was anxious about her recovery, I felt greatly encouraged during the three succeeding days that I saw her after the completion of the delivery.

I was requested to discontinue my visits on the 28th, as the nurse assured them she would have the patient about in ten days if she could only be allowed to have her own way.

I was sent for on the evening of March 5th, and found that on March 1st, the day after my last visit, that there was a putrid coagula passed, with a chill and fever the same day. There had been frequent chilly sensations since, and fever daily, the lochia had become less and less in quantity and more and more offensive. The atmosphere was sickening to me, no attempt at ventilation, and neglect to use vaginal injections, as ordered the day after confinement.

Inadequate nourishment had been used, and now there was vomiting of everything taken, with intense headache. There had also been a failure to use nutritious enemas, as I had directed, and the nurse had had her own way.

I found the pulse at 120, respirations 48, and the temperature 103°; urine normal, bowels confined and tympanitic, no pain or tenderness or other evidence of metritis or peritonitis.

On the next day there was another chill, the pulse went up to 150, temperature and respiration unchanged.

My diagnosis was puerperal septicæmia, or puerperal septic fever, and prescribed accordingly. The treatment proved of no account, as the patient continued to sink daily, and died on the evening of March 8th, eleven days after her confinement, and eight days after the first change was noticed.

I can see no connection between the two cases in support of the infectious or contagious theory, which I accept in full, and always feel anxious, when I have to care for erysipelas with obstetric cases, as I have had to do heretofore, and always without any trouble.

I have given you an extended history of the cases, that you might judge for yourself how far they were dependent upon each other, hoping you may frankly give me your own conclusions.

Respectfully yours,

GEORGE J. NORTHROP.

I do not know what ideas may arise in the minds of others on reading this letter of Dr. Northrop's, but it seems to me to suggest several which ought, in some way, to be useful to humanity:

1. It suggests, as has many times been done, the immediate production of septic material as one source of puerperal disease. 2. That the intelligent physician can do much toward preventing, if he cannot entirely prevent, the presence or the serious effects of such decomposing material, *if the care of such a physician is secured.* 3 That quite a large proportion of the people have not sufficient knowledge to enable them to appreciate the need of the expert aid of an intelligent physician under such or similar circumstances.

At a time of more than usual peril this case was withdrawn from the care of an intelligent physician and placed under the care of a woman who probably was not, to say the least, familiar with what has somewhat recently been learned by the medical profession. The patient died. It seems to me that this is a coincidence of a kind that is altogether more common than it ought to be; and that the medical profession is able to do much to remedy this condition of things if its members only choose to do so. Why cannot the profession plan and carry out a general organized system of work which will tend to improve the relations between the people and the profession? Why should the medical sciences, of all others, remain confined to the profession, "hid under a bushel?" Investigators in all other sciences recognize the importance of "popularizing" their results, in order to sufficiently interest the people that they will patronize them. No science can receive much aid, or make much progress, except this be done. It seems to me plain that the reason why so large a number in all our communities seem to prefer to patronize quacks, is because the quack is about the only one who takes any trouble to "popularize" knowledge (?) respecting the cure of disease. I believe in "preventive hygiene," and in "public sanitation," but I also believe in "preventive medicine," and for this we have, under existing conditions, little or no provision. Under existing relations, or want of proper relations, between the most advanced and conscientious members of the medical profession and the common people, the noblest and best work of these physicians is seldom called for or allowed to be performed; and when it is performed it is seldom paid for. That skillful guidance past real dangers which only physicians now appreciate is comparatively seldom except among the most intelligent of the people who have, in some way, gained a more than usually clear idea of the value of the skilled physician when laboring to *prevent* evils.

We have a State Board of Health that does what it can to advance public health, but for "preventive medicine," properly so called, and certainly for anything connected with the "cure" of disease, we must look to the medical profession. When it

comes to the administration of "medicine," for prevention or cure, a doctor is needed, and there is certainly some way in which the masses can be made to have some appreciation of the difference between a rational, scientific physician and an ignorant "Chinese doctor," "Indian doctor," or other such impostor.

I believe the profession can do much, for itself and for humanity, by encouraging the free and general publication of such articles, by physicians, as will tend to give people an idea of the rapid progress of knowledge in the various medical sciences. Why shall not our local and larger medical associations ask their members to prepare and read before them papers giving an account of the present condition of our knowledge of anatomy, of physiology, medical chemistry, etiology, pathology, of the materials of medicine, and of the action of remedies? And when these papers are well written, in terms not too technical, why not pass a resolution requesting copies for publication, request some local paper to publish, or permit a committee to make such arrangements for general publication as may best be made. Why not follow this up from time to time with articles on recent progress in each and all of the medical sciences? Much can be conveyed, even though some technical terms have to be employed. The people find it possible to master many technical terms in law, and in the other sciences; there is no reason why they may not in the medical sciences. The more such authorized and vouched for articles are read by the people, the more they will be instructed, and the less inclined to patronize ignorant quacks and gross impostors. In my opinion there is no other way in which it is possible to get the people properly to support and maintain rational medicine, up to present standards —much less support that "advanced standard of medical education" of which we have heard so much, but which seems so difficult to inaugurate.

The American Medical Association and our State and local societies permit reports of discussions and resolutions to go into the daily papers, frequently in a way that leads to anything but respect for the profession, chiefly, perhaps, through imperfect

representation of the facts. Why not have some systematic and intelligent effort in and by such societies whereby what the people receive shall be such as will be *of use to them*, and such as will cause them to have a higher respect for those societies and for the profession as a whole?

Very respectfully,

HENRY B. BAKER.

LANSING, August 2, 1877.

Reports of Societies.

Calhoun County Medical Association.

The Society met agreably to call of Secretary, June 26th, at two P. M., in Fireman's Hall, at the City of Battle Creek. President, J. H. Montgomery, of Marshall, occupying the chair, called the meeting to order, and in a few well timed remarks explained that the regular meeting had been deferred by the authority of the Executive Committee to the present time, for the reason that the meeting of the American Medical Associa- at Chicago, at which many of our members wished to be present, occurred during the first of the month of June.

Roll called. Present: Drs. Montgomery, Smiley, Cox, Thomlinson, French, Garcia, Foote, Stoddard, Crosby, Haight, Phelps and Davis.

Proceedings of the last meeting read and approved. Drs. J. H. Kellogg and D. C. Hawxhurst, and Miss Dr. Katie Lindsly, all of Battle Creek, were elected members of the Association.

As essayist of the occasion, Mrs. Dr. M. A. Garcia read a very interesting paper, the subject of which was "Uterine Pathology." It is too long for insertion into this report, but too good to be entirely left out.

She introduced the subject by remarking that even in the present advanced knowledge of the profession in regard to

uterine pathology and therapeutics, and the flood of light which had of late been thrown upon these subjects by the means of instrumental examinations, much yet remains to be elucidated.

"The past decade had witnessed a complete transformation of uterine pathology, owing to a more correct diagnosis by instrumental means, and till this time, the great error of the profession was in looking upon and describing inflammation of the uterus as a rare disease in the non puerperal state, whereas it is a most common one. As the uterus is that organ to which is entrusted the preservation of the species, and not of the individual to whom it may belong, it has consequently no momentary function to perform like the brain, heart or lungs, with which interference by inflammation gives rise to a group of decided and unmistakable symptoms. But inflammation of the uterus may long remain unappreciated, primarily because its function is shown only monthly, and because it is a much less sensitive organ than most others, and because interference with it does not stop a function immediately necessary to life."

The essayist noted that ancient Greek and Roman physicians made use of ocular inspection, by instruments, of the uterus, and were conversant with many of the other instrumental appliances of the present age. "That these means of diagnosis should have subsequently (during the dark ages) fallen into complete abeyance along with the information obtained through its means, is a singular circumstance in the history of medicine, which can only be explained by the peculiar social conditions through which medical science has since passed." Very many of the so-called inventions of instruments for gynecological surgery have proved to be only re discoveries of old ones.

The writer next noticed the difference in structure and physiological action of the body and cervix of the uterus, and of the far greater predisposition of the latter to disease. She maintained that the periodical function of menstruation is very productive of uterine disease in our highly artificial and foolishly fashionable life, the first symptoms of which disease were leucorrhœa, dysmenorrhœa, menorrhagia, amenorrhœa, etc. She contended most displacements are the results of previous inflam-

mations, and thinks it a grave mistake to treat them independent of the inflamed condition. In short she would consider a displacement of the uterus as the one chief symptom indicative of inflammation of that organ, and therefore, all displacements are to be treated effectually only by attacking the primary condition (inflammation) to which they owe their existence.

The essayist gave briefly the histories of the two, at different times, prevalent theories in regard to all uterine disorders, the displacements, and the inflammatory theory, showing the false basis of the former and the reasonableness of the latter. Also gave her general line of treatment, and closed her interesting essay with these words: "The treatment of uterine inflammation should, therefore, be mainly local, and yet we should not ignore general remedies by any means. In the incipient stage, local depletion should be resorted to. If the inflammation be irritative, mild and soothing treatment should be followed; if sluggish and malignant, the treatment must be more energetic. *In all cases*, regular, punctual and *persistent* local treatment should be observed.

"The views which we have thus taken of uterine pathology may be narrow and circumscribed, yet, indeed, the subject is as exhaustless as its objects are innumerable. Every one who has studied uterine pathology for himself is likely to have seen something that no one else has seen. Let us encourage him to tell us what *that thing* is, so that we may also get leave to see it. Every new friend who will tell us what his own observations have been may be as good as a new pair of eyes to us. If we believe that the *whole truth* is visible to us, the little we know will close around us like a prison, and the universe, for us, will narrow itself to the dimensions of a *cell*."

At the conclusion of the reading of this essay, Dr. A. M. Haight, of Albion, chairman of a special committee to report upon the use of plaster of paris in diseases of the spine, read a paper of which the following is a synopsis.

Your chairman's experience in the use of plaster of paris in Pott's disease of the spine is limited, and also incomplete, as his cases have not yet fully recovered. Having seen plaster

used with great success in cases of fracture, gunshot wounds, etc., he came very much to love it as a permanent dressing and in his practice has used it on every appropriate occasion with most satisfactory success. When Dr. Sayre, of N. Y. City, first spoke of using it in Pott's disease, your chairman feared it would be difficult to use it in private practice on account of its weight, stiffness, and especially its difficulty of application. But subsevuently learning more of Drr Sayre's treatment, I resolved to give it a trial at first opportunity, so I made an appliance for suspending the patient from neck and shoulders, and soon used it for the first time in the following case 1st. Mabel F., aged five years. Called to see her July 20, 1875. Found patient running around, but complaining of pain in knee and "leg ache." Found she could not stoop to the floor without resting one hand on the knee and moving very slowly. Stumbled over slight obstacles on the floor. Examination of back revealed a small angular curvature at the juncture of the fourth and fifth lumbar vertebræ. I advised counsel, and she was taken to Dr. H. O. Hitchcock, of Kalamazoo, who confirmed my diagnosis of Pott's disease and recommended absolute rest and the syrup of iodide of lime and iron in conjunction with bromide of potassium and fl. ex. ergot. This treatment was as closely followed as was possible for some time, but the patient got no better, but rather worse. An abscess soon appeared; this was evacuated a number of times by the aspirator.

At about July 19, 1876, assisted by Dr. John P. Stoddard, I applied a plaster of paris bandage, as advised by Dr. Sayre. This gave instant relief. When the bandage was applied there was pus still in the abscess, but we left it to take care of itself. She could now run about at will and the difficulty of retaining urine was relieved. As soon as she was accustomed to the jacket she would not consent to have it removed. Wore this same jacket until the last of February, or about seven months, when it had become so much broken that another one was put on. The abscess had nearly disappeared, and there was less tenderness over the spine and much less curvature. She still

wears the second jacket, which still gives relief and furnishes abundant hope that she will soon be permanently cured.

Case 2d, was one of lateral curvature of long standing in a man 21 years of age. The curvature was to the left in the dorsal region, to such an extent that the spine was hidden under the scapula. A corresponding curvature to the right in the lower dorsal and lumbar vertebræ also existed. Patient complained of constant pain in left shoulder. Assisted by Dr. Stoddard, we suspended him by his neck and shoulders on the 25th of July, 1876. Found that there was not complete anchylosis of the vertebræ and therefore applied a plaster jacket. This relieved all pain in the shoulder and enabled him to be on his feet all day. He is now wearing his fifth jacket. The repeated stretchings he has thus had, has made him 2½ inches taller than when first applied, and the spine is now fully an inch from the left scapula. The present prospect is, that by keeping the vertebræ at rest that complete anchylosis will soon occur and he be fully relieved and partially straightened."

Dr. O. S. Phelps, the other member of this special committee, then made a supplemental report on the same subject, presenting at the same time a patient on whom he had applied one plaster jacket, and on whom he wished to apply another one in presence of the Association. The following is the history of the case:

Jay Wolverton, aged 24, was injured four years ago by a rolling log bending him backward. Two years later was thrown from a horse and spine injured again in same place. Soon swelling appeared at seat of injury, but was called by his family physician a fatty tumor, but later, by another physician was pronounced a lumbar abscess. Was evacuated, and abscess has been discharging ever since. On May 20th last, patient consulted me. I found evidences of caries of three or four of the lumber vertebræ and advised an immediate application of a plaster jacket as a mechanical support. Eight days later, assisted by Drs. Haight and Stoddard, of Albion, applied the dressing as described by Dr. Sayre. The patient was at once relieved of his previous pain, which had been continuous for four years, and

the abscess ceased to discharge. Has since been enabled to work on a farm with little pain.

This jacket having become much broken was taken off, and in the presence of the Society, another one was applied; and after it had hardened the patient expressed himself as being very easy and that he would not be deprived of the ease and support it gave him for any amount of money.

The discussion of the regular topic of the meeting, diphtheria, was then opened by Dr. Phelps. He commenced by giving the differential diagnosis of diphtheria, croup and scarlatina. He made a very interesting and instructive grouping of the symptoms and physical signs of the allied diseases.

The Dr. rather leaned to the opinion that this disease is a constitutional one, and in the treatment this should be kept constantly in view and great use be made of all known remedies that act as tonics. He considered the local troubles only a manifestation of the general disease. He would support the patient by iron, quinia, nourishing diet, and even diffusible stimulants, but should put much dependence upon warm steam baths to the throat. Also use fumigations of hot water and vinegar with good effect.

Dr. Phelps was followed by Dr. Cox, of Battle Creek, who concurred in what had been said by the former as to the symptoms, diagnosis, differential diagnosis and sequela of diphtheria, except that he had known paralysis to be a sequel of scarlatina as well as diphtheria. He used locally a solution of chlorate of potassium and muriate tincture of iron, and, like Dr. Phelps, used fumigations of water and vinegar. For internal treatment depended on quinine, tincture of iron and chlorate of potash.

The president, Dr. Montgomery, remarked that he had not only been called upon to treat a great many cases of diphtheria, but had also suffered from it in person. He agreed substantially with the other gentlemen, but would say that he had always found the quickest and most complete relief from breathing the fumes from slackening quick lime. He used it in his own case, and now in all others, and it had so far never failed in bringing

relief to the sufferer. Used nitrate of silver locally. Should now try sulpho-carbolate of soda.

Dr. A. Crosby, of Albion, said he believed in the use of local remedies in this disease, but of all, placed most reliance upon nitrate of silver in the stick; said he preferred this to a solution for the following reasons·

1st. You can apply it very lightly or very thoroughly in the stick to the parts affected, as you may think desirable, while a solution is not so easily handled.

2d. You can better confine its action to the parts affected than when in solution.

3d. As the parts affected with the fibrinous exudation are very much devoid of feeling, while other parts are very sensative, we can make a more thorough application and with less fear of doing damage to adjacent parts than with a solution.

He was lead to use the nitrate of silver with greater confidence from the fact that he learned that when the diphtheritic membrane appeared upon blistered surfaces, he could heal these sores faster by using the nitrate than by any other means. He believed that where a thorough local application of the nitrate is had on the start, there is far less danger of a general poisoning of the system, as is noticed by Oertel, a writer in the German Cyclopædia. He always made use of the general tonic treatment spoken of by the previous gentlemen, but confessed he placed his main reliance for systemic treatment upon the chlorate of potash, tincture of iron and quinia.

At the close of this discussion, Dr. Crosby invited the Association to meet at Albion at its next session. This was accepted by the adoption of this resolution, introduced by Dr. Stoddard:

Resolved, That when this Society adjourns, it adjourns to meet at Albion, on the first Tuesday in September next.

Resolutions were adopted thanking the Common Council of Battle Creek for the use of their hall.

The Chairman then made the following announcements:

As essayist for next meeting Dr. Amos Crosby, of Albion.

Next topic of Discussion, Scarlatina. To open the same, Dr. M. W. Thomlinson, of Battle Creek, and Dr. Jas F. Smiley, of Marshall.

The Society then adjourned.

JOHN P. STODDARD, M. D.,
Secretary.

Allegan County Medical Society.

The Allegan County Medical met at Allegan, Mich., May 31, 1877, at 10 o'clock A. M., Vice President H. F. Thomas, M. D., in the chair.

Present, Drs. H. T. Thomas, E. Amsder, J. J. McConkie, H. S. Lay, F. M. Calkins and J. A. Mabbs.

A motion was made by Dr. Lay that a committee of three be appointed to draft resolutions touching the death of Drs. A. R. Calkins, and D. M. Crane. Carried.

Drs. Amsden, Lay and McConkie were appointed as such committee.

A communication was read from the Secretary of the State Medical Society recognizing this society, and thereby entitling it to representation in the American Medical Association.

Moved by Dr. Calkins that at each regular meeting the president appoint two members to prepare papers upon some medical subject and read them at the next regular meeting, and to place the same in the hands of secretary, if absent. Carried.

Moved to take a recess until 2 P. M. Carried.

The Society was called to order at 2 P. M., Vice President H. F. Thomas, presiding.

The prophylactic effects of belladonna in scarlet fever were then considered.

Dr. McConkie thought it a safe remedy and sure. Would not give it if not to prevent. Used it as a prophylactic, but could not give its *modus operandi*, but considered it possessed such properties.

Dr. Amsden said that belladonna was first introduced as a prophylactic by Hahnemann and his followers. This did not give a good recommend. Thinks that in hygiene we possess a

better prophylactic and that the former is too often used to the exclusion of the latter. Have not found it to possess any prophylactic properties.

Dr. Lay said that he had not found belladonna of any use as a prophylactic in scarlatina. That our best authors were not in favor of it. Found isolation and good sanitary conditions were the best with the use of tincture ferri chloridi.

Dr. Thomas had never been sorry that he had used it but had been when he did not. Have seen good effects alike as a prophylactic and remedy in the disease. Shall continue its use.

Dr. F. M. Calkins: I find some authors advise giving belladonna until it produces its physiological effects. It is very difficult to get patients to take it, from its disagreeable symptoms. My experience is not much in its favor.

Further consideration was then postponed and the following question was taken up. "Are there any physiological reasons for placing the new-born child upon the right side in preference to the back or left side?"

Dr. McConkie had experienced benefit from this position for the first three or four days, during which time the foramen ovale was imperfectly closed, and this position favored more complete closure of the valve of Botali. He also spoke of some cases in his practice in which this position gave immediate relief.

Dr. Amsden had not perceived any benefit from this position upon the right side, but the suffocation of the new born child frequently due to too much pressure upon the chest, and removing gave relief. Did not recommend any particular position.

Dr. Lay had found position upon the right and head raised to prevent and remove asphyxia of the young child. Also read reports of cases from authors who spoke in favor of this position.

Dr. Calkins spoke of the anatomy of the fœtal heart and deduced the cause of suffocation.

It was moved that the editors of our several county papers be requested not to publish our names in connection with cases or surgical operations. Carried.

Moved that when we do adjourn, it be until the last Wednesday in June, 1877. Carried.

J. A. MABBS,
Secretary.

P. S.—This society has had no meetings since January, 1872, until April 26th, 1877. It now proposes to meet regularly hereafter.

Abstracts from Exchanges.

Practice of Medicine.

THE LATE EPIDEMIC OF TYPHOID IN PARIS. (*British Medical Journal*, March 24, 1877)—The total number of deaths caused by typhoid fever in Paris during the last six months is 1,645. Assuming an average mortality of 20 per cent. this would correspond to 8,000 or 9,000 cases, or one in every 200 inhabitants. M. Besmer, who has been studying the epidemic, states that typhoid fever attacks a much larger number of men than women, of boys than girls; but the relative mortality of the disease being greater in women and girls, the ultimate result, as regards the two sexes, becomes, as a matter of fact, equal.

BELLADONNA IN ENTERIC FEVER. (*Dr. Harley, Edinburgh Medical Journal*, Dec., 1876)—1. In moderate and repeated doses belladonna exercises a hypnotic and sedative action on the brain and spinal cord, and a powerful stimulant action on the sympathetic nervous system.

2. Its action is the same whether it be given alone or in combination with opium, but with the latter it is somewhat intensified.

3. Moderate doses excite for hours a tonic and contracted condition of the small arteries and capillaries.

4. Excessive doses produce exhaustion and a dilatation of the minute vessels, with a resulting stasis of the blood.

5. Fifteen minims of the succus (B. P.) exhibited every four or six hours, is sufficient to maintain the moderate beneficial atropism.

6. This dose never increases delirium, if present, but usually diminishes it.

7. In the occasional attendant congestion of the kidneys with albuminuria, it is the appropriate remedy, as an active circulation is kept up in that organ during the entire time of its elimination by the same.

The results of its administration in the recorded cases of Dr. Harley were:

1. The rate of the pulse and the temperature were never, as a rule, increased, but on the contrary, both symptoms uniformly declined.

2. Prolonged use of the medicament after cessation of pyrexia, caused an irritable debility of the heart, as if from overstimulation. Accordingly the dose, symptoms, and course of the disease must be watched

3. One of its most noticeable effects was the moistening of the tongue during the pyrexia.

4. The delirium was never increased, and its presence is not a contra-indication to the exhibition of belladonna. Insomnia was also generally diminished.

5. Its effects upon the skin, the diarrhœa and hæmorrhage were unnoticeable.

Sudden Death from Embolism. (*Dr. R. H. Fitz. Boston Medical and Surgical Journal*, Jan. 25, 1877).—A marked feature in such cases is the sudden and unexpected nature of the attack, whether taking place during the progress of disease or in persons apparently in good health. No effectual relief can be furnished to diminish the distressing symptoms unless it is by the administration of anæsthetics, which simply brings about a state into which the patient will probably soon pass, as the carbonic acid poisoning becomes evident.

No symptoms point absolutely to embolism, although there are some which are suggestive. The symptoms of an immedi-

ately fatal attack are: Sudden extreme dyspnœa with open tubes, cough and thoracic pain, lividity or pallor, rapidly failing pulse, cold sweats, intense anxiety, and attacks of fainting or unconsciousness, with or without spasms. These may be referred to the lungs, heart and nervous system, and are evidently due to the sudden elimination of more or less of the pulmonary circulation. The results are two-fold, blood accumulation in the right side of the heart and nervous system in general, and blood diminution in the left heart and arterial system. This arterial blood is poor in quantity and quality, since, owing to the obstruction in the pulmonary vessels, it is poor in oxygen and rich in carbonic acid. For the same reason the venous blood throughout the body contains an excess of carbonic acid; and hence the feeling of suffocation with open air tubes. The heart's action becomes enfeebled and irregular from insufficient blood supply to its walls, as well as from eventual paralysis of the pneumogastric nerves, and death is thus likely to occur from asphyxia.

In the diagnosis the suddenness of the conditions being of the chief interest, all those forms of suffocation requiring time for their production may be disregarded, and there remain—

1. Closure of the greater air passages or of a large number of small ones, from without or from within.

2. Nervous lesions, particularly intra-cranial, affecting respiration and circulation.

3. Obstruction to the pulmonary circulation from emboli, of blood and air particularly, fat being more gradual in its effects.

Physical and rational evidence of open air passages eliminate the first series. In intra-cranial origins of suffocation the predominant early symptoms are those of cerebral anæmia, namely, pallor, relaxed muscles, disturbed hearing and vision, contracted pupils, fainting and convulsions. Dyspnœa may sometimes precede these symptoms, but it is not of so severe a character as in the other series.

In favor of the third is the history of an antecedent thrombus, or of a disease of the heart likely to be associated with thrombosis.

Acute Ammoniacal Collapse. (*Centralbl. f. Chir., p. 694,* 1876. *Med. Times,* Jan. 20, 1877).—W. Roser, from a series of cases of acute ammoniacal collapse, draws the following conclusions:

1. Acute ammoniæmia arising from the absorption of decomposing urine excites sudden collapse, with decided lowering of the temperature of the blood.

2. In cystitis and pyelitis this lowering of the temperature may serve as a diagnostic sign of ammoniæmia.

3. If the originating cause of the acute ammoniæmia can be removed without loss of time, for instance, by puncture of the bladder, urethra or pelvis of the kidney, the collapse is frequently observed to pass off.

4. Ammoniæmia deserves much more attention at the hands of surgeons than it has hitherto received.

Considerations on the Cures in Insanity. (*Guy's Hospital Reports, 3d Series, 1876. Am. Jour. Med. Sciences,* Jan., 1877.)—Dr. G. H. Savage, in a very carefully prepared paper upon this subject, makes the following remark, which is of peculiar interest to the general practitioner, since he is more apt to see cases of insanity at the beginning than at any other time:

"It is to be observed that cases get well in much larger proportion if they have been sent to an asylum early. This is a most vital point, and one that we are never tired of bringing before the public and the general practitioner. It is false economy—if done for economy—to keep a patient in a workhouse or in a private house when he is distinctly insane. My experience completely corroborates that of Dr. D. H. Tuke, at 'The Retreat,' that over 70 per cent. of cases admitted within three months of the first attack get well; whereas, of sufferers from a first or other attack admitted to an asylum treatment twelve months after the onset not twenty per cent. get well."

The Pneumogastric and the So-Called Inhibitory Nerves. (*Comptes Rendus, Lon. Med. Rec.,* Jan. 15th, 1877.)—M. Onimus reports the results of a series of experiments upon

the effects of electrical stimulation of these nerves. An ordinary Faradic current interrupted thirty to thirty-five times in a second corresponds pretty well with the number of nervous shocks transmitted along special nerves; so that striped muscles usually respond well to the stimulus. Automatic and rythmically acting organs require some numerical relation to be observed between their rythm and the stimulus, or the effect will be a perturbation instead of increase of function. Like C. Legros, he found that if the pneumogastric nerve were stimulated by a current interrupted at long intervals no arrest of heart's action took place, and for this result 16 or 18 shocks per second were required for warm blooded animals. From his new experiments he announces that by even and moderate stimulation of the heart, at intervals corresponding somewhat to the existing cardiac rythm, stronger contractions are produced, and that by this means the hearts of animals nearly poisoned by curare or chloroform can be re-awakened to functional action. The peristaltic action of the intestines, when the latter are not empty, was increased, if the interruptions were somewhere about equal to the normal rythm of fifteen to eighteen per minute.

In the vaso-motor nerves currents interrupted at long intervals produced, not tonic contraction, but dilatation with increase of temperature.

Hence the nerves of vegetative life and of unstriped fibre, above all when they belong to organs which have a rythmic, coordinated, and automatic movements, do not respond to artificial stimuli in the same way as spinal nerves. Too numerous and too rapid excitations cease to provoke functional acts and become causes of perturbation. The phenomena of arrest which have been obtained in these conditions are the results of this perturbation. So-called depressor nerves come under the general laws of action of all nerve filaments, their physiological excitation provoking always the activity of the organs to which they are supplied.

Ergot in Diabetes Insipidus.—Dr. J. M. Da Costa *(Medical and Surgical Reporter*, Jan. 6, 1877), on the strength of the good results obtained in the treatment of three cases of diabetes

insipidus, highly recommends the use of ergot in this affection. He administers it in one to two drachm doses of the fluid extract thrice daily. In his last case the amount of urine during the twenty-four hours was reduced from eighteen pints to four after three weeks' treatment, and it did not again increase on the suspension of the remedy.

ANHYDROTICS. *(Fothergill, London Practitioner.)*—Anhydrotics are agents which check profuse perspiration. The term is formed by the addition of alpha (a) privative to the adjective hydrotic, the name of the acid found in the sweat by Favre. The temperature of the body is regulated in health by the activity of the sudoriparous glands, which are thickly scattered over the surface of the body. In disease the vascularity of the skin and the functional activity of these glands are not directly proportioned to each other, for Leyden found that there was no perspiration in the dry, burning skin of a rising fever. On the other hand when syncope or terror supervenes, with a blanched skin, the sweat glands are active, and the cutaneous surface is studded with beads of perspiration, so that although there is an arterial anæmia of the skin, their activity has not ceased. This is possible by means of the large plexus of capillaries at the base of each gland. These cold perspirations usually denote conditions of exhaustion.

Sweat is a secretion and not a transudate, as the entire absence of albumen shows. It is normally acid, but when profuse or prolonged the secretion becomes neutral or even alkaline, but whether from the lack of acid or the increase of alkalies has not been determined. With the increase of secreted fluid grows the amount of solids excreted. The salts of the body, especially the phosphates and chlorides, are thus reduced, and the evil effects of profuse perspiration become readily intelligigle. Hence in conditions of debility with tendency to exhaustion, this becomes a serious matter, for we have the vicious circle; the greater the debility the stronger the tendency to profuse perspiration; the more the perspiration the greater the exhaustion induced. If we check the excessive sweating, we break, in one point at least, the ever widening circle.

Of the anyhdrotics some are administered internally, others externally. Of the latter the mineral and vegetable acids in a large proportion of water and applied with a sponge are the most useful. Heat applied in the form of sponging with water as hot as can be borne is another important one, according to Dewitt, in the excessive perspiration of phthisis.

Of the internal remedies the chief are dilute phosphoric acid, other acids, the mineral and vegetable astringents, the oxides of silver and zinc, tonics, and some of the solanacæ.

The first is given at intervals during the day, or employed, well diluted and sweetened, as a beverage during the night. Of the other acids, the dilute sulphuric acid in sulphate of magnesia gives satisfactory results. The astringents are as useful here as in any other form of flux.

The sulphate of copper is a powerful agent in this respect, and when given with opium, to check the cough, and pil. al. et myrrh, to keep up the action of the bowels, the combination forms one of the best remedies for the exhaustive hydrosis of phthisis.

The vegetable astringents are not usually given alone, but are combined with the mineral and the acids.

The indication for tonics is patent to all.

The oxides of silver and zinc are both useful, but their utility is greatly enhanced by the addition of hyoscyamus. In belladonna we have the most potent of all anhydrotics, and in pulmonary phthisis its use often changes the aspect of a case, for it is as potent in arresting the night perspirations as digitalis is in giving tone to a feeble heart. In the last stages of disease neither are very effective, but in the early ones the action of each is very pronounced. The loss of the salts of the body in profuse perspiration quickly exhausts the system; and the arrest of this drain commonly permits of the other measures being effective in improving the general condition. To produce these effects the dose must commence with 1–75th of a grain of atropine and go up to 1–25th, unless the perspiration ceases before reaching the last point; the latter dose rarely fails. Once the effect is obtained, smaller ones will maintain it. Dr. Ringer's doses are too small to be beneficial. Even with the 1–25th of

a grain of atropine every night, the patients do not complain much; all prefer the little dryness of the throat and indistinctness of vision to their dreaded night-sweats. Belladonna, in conclusion, seems to be a specific anhydrotic, acting on the sudoriparous glands as it does on the sub-maxillary gland.

Simple Means to Lessen the Pain of a Blister.—(*Lyon Medicale—The Clinic*, Feb. 10, 1877).—M. Ernest Besnier proposes the following plan: Apply the blisters early in the morning; these, properly prepared, covered with a leaf of oiled Joseph paper, will cause very little pain, and never produce the sometimes grave and always painful vesical and renal symptoms, provided that the blisters are removed after five or six hours, at most, or soon as the epidermis commences to lift itself lightly and partially, which one can easily tell by the ivory-colored and wrinkled appearance of the skin. Now cover the latter with blotting paper, saturated with cerate or cold cream. Vesication then continues, almost painless, and the blister is almost as large as if the application of the cantharides had been continued.

Variation in the Number of White Blood-Globules in Certain Maladies. (*Prog. Med.* Dec. 2, 1876. *Med. Record*, Feb. 3, 1877.—Dr. Henri Bonne of Paris, says that there is a constant relation between the production of pus and the presence of an excess of white globules in the blood. Thus, during the evolution of an abscess there is an excess of the globules in the blood, but as soon as exist is given to the pus, this excess disappears. Also when a suppurating wound exists, the white corpuscles are in excess. In the internal febrile maladies, the period of leucocytosis does not seem to correspond to the time of the highest temperature, but to the formation of pus in the organism; thus in typhoid fever, the increase is observed at the outset of the disease, and at the commencement of convalescence, and in pneumonia, only at the period of hepatization. After the eruption of a group of herpes vesicles, during the continuance of the lochial discharge, after parturition and during leucorrhœal discharges, the white corpuscles are likewise diminished in number.

Therapeutics.

Treatment of Ringworm of the Scalp by Croton Oil. (*Bull. Gén. de Therapeutique*, Aug. 15, 1876; *Boston Medical and Surgical Journal*, June 14, 1877.)—Dr. de Lacharriere advises the employment of croton oil mixed with an equal part of lard for the cure of this difficulty. The preparation is to be rubbed repeatedly into the scalp until the hairs of the affected part loosen, owing to the specific folliculitis produced by this substance, and fall. He claims to have obtained many cures in six or eight weeks in this way, after the usual methods of epilation, mercurial application and the like have failed.

Salicylate of Soda in Chronic Diabetes Mellitus. (*Ber. Klinische Wochensch. Boston Medical and Surgical Journal*, April 19, 1877.)—Dr. Muller-Warner, from a detailed account of two cases of this disease treated with this drug, arrives at the following conclusions: 1. Salicylate of soda can completely remove the symptoms of diabetes mellitus, yet its action does not appear to be lasting in many cases. 2. The symptoms of diabetes are made to disappear the quicker by salicylate of soda the greater the dose in which it is used and the longer it is borne by the patient. 3. The first action of medium daily doses, nine to ten grammes, on diabetes appears gradually to abate, while large doses, fourteen to sixteen grammes in a day, act on patients progressively. 4. Salicylate of soda can be borne in chronic diabetes mellitus in large daily doses for a long time without special disturbance of the general condition. If symptoms of poisoning appear, they rapidly and completely disappear, after a short omission of the drug. 5. Salicylate of soda in chronic diabetes, even on long continued exhibition, appears to possess only a slight irritating action on the kidneys.

Artificial Milk.—Some patients cannot take milk and yet need to be fed on a liquid food. The following substitute will meet such cases. (Fothergill's Therapeutics, page 546.) Pour a pint of rice water upon a tablespoonful of a mixture of fine almond flour (4 ozs.) and prepared sugar (2 ozs.) The lat-

ter consists of sugar of milk 13 ozs., powdered lump sugar 2 ozs., and 1 oz. of a combination of salts of which this is the formula: chloride of potassium, 6 ozs; phosphate of soda, 3 ozs; phosphate of magnesia and phosphate of iron, 1 dr. The rice water should be poured on boiling hot and the mixture well stirred, after this it should cool and then be strained through a sieve.

Salicylate of Atropia. (C. R. Tichborne, F. C. S., *American Journal of Pharmacy*, April 1877)—The ordinary solutions of atropia are open to several objections, for if any proportion of the liquid consists of rectified spirit, irritating effects are produced upon the eye, although the preparation keeps well; while if distilled water is employed as the solvent, although irritating effects are avoided, the solution quickly shows the presence of fungoid growths. Mr. Tichborne, after numerous experiments to form a salt of atropia and salicylic acid, recommends the following formula, a preparation of which, after having been kept six months without presenting the slightest sign of a fungoid growth, was employed by several of his friends who are in the foremost ranks of ophthalmic surgery. They all agree in its superiority for keeping properties and non-irritating power.

℞ Atropia..... .....2.7 grains.
Salicylic acid (crystal)..... .....1.3 grains.
Water..... 1 ounce.

Mix and allow it to stand until it is dissolved.

Hyoscyamine as a Hypnotic. (*London Med. Record. Boston Meaical and Surgical Journal*, March 22, 1877.) Physiologically this drug causes a subdued form of mania, associated with almost complete paralysis of the voluntary muscles. From these premises, Mr. Dawson supposed that the quieter form of mania might be substituted for the very excitable cases and that this effect in its turn would disappear and leave the patient in a state of quiescence. Accordingly a grain and a half (0.097 gramme) was administered to a violent maniac, who had already spent a month in the asylum, and two hours after the patient was fast asleep. The next morning he was very subdued and from day

to day his recovery progressed and in less than two months from the single dose of hyoscyamine and after a period of complete sanity, he was discharged In his paper, Mr. Dawson says: "In about fifteen minutes the most violent and excited patient can be thrown into a comparatively deep sleep by about a grain of the amorphous alkaloid, and on wakening from his slumber almost invariably frees himself also from the delusions and hallucinations which have bewildered him, and I can adduce numerous instances in which this recovery, rapid as it has been in its accession, has also been thorough and enduring." The following is the form in which it is administered:

℞ Hyoscyamine..... grj.; or 0.064 gramme.
Spt. Etheris.....minims viii.
Alcoholis.....minims xxiv.
Aq. font.....ad. ℥i or 29 c. c.

Chamomile Fumes in Hay Fever. (*Medical and Surgical Reporter*, April 14, 1877.)—Drs. Barnes, brothers, of Illinois, from their success with it, suggest this simple remedy, the inhalation of the smoke from burning the flowers of the English chamomile (anthemis nobilis). The fumes should, of course, be brought into contact with every portion of the nasal passages, in order to receive the full benefit of the drug. A few coals on a plate and the flowers dropped on it, is a good way of using it.

Action of Remedies.

Action of Iron in Anæmia. (*Gaz. Med. de Paris*, Dec. 9, 1876. *Med. Record*, Feb. 10, 1877).—M. Hayem, in the course of his researches upon the condition of the blood in anæmic patients, publishes some facts supporting the opinion that iron acts on the ultimate nutrition of the red globules.

1. In a cubic millimetre of blood we find, on the average, about 5,500,000 red globules.

2. In moderate anæmia the number is about the same, but they are altered in size and contain less hæmoglobine. Thus in a given case, containing 5,352,000 globules in a cubic milli-

metre of blood, the latter will not be more colored than if it contained 2,500,000 healthy globules.

3. Under the long continued use of iron the globules diminish in number, but they acquire their normal dimensions and become richer in hæmoglobine.

4. In extreme anæmia the number of globules is diminished, e. g., to 2,500,000.

5. Under the use of iron a number of new, small, pale red globules first appear, and then the blood undergoes the same changes as in moderate anæmia, so that when the cure is effected the globules are individually physiological, but are less numerous than at certain periods of the disease.

6. In the anæmia of the fatal cachexias, larger globules are found than those of normal blood. When the anæmia becomes extreme these hypertrophied elements increase in number, and although very small elements are present, the average dimensions of the globules vary less from the normal than in less intense anæmias. The red globules now decrease daily in number, and iron no longer arrests the progress of the change.

7. The use of iron, even then, may cause the remaining globules to take up hæmoglobine, and the hypertrophied elements may possess more coloring matter than healthy globules. Thus, in one case, containing only 414,062 globules per cubic millimetre, the average value of each globule was 1.34.

Poisonous Action of Salicylic Acid.—Prof. Abelin, of Stockholm, *(Lon. Med. Times and Gaz., Med. and Surg. Reporter*, Feb. 17, 1874*)*, is of opinion that in young children the use of salicylic acid must be very restricted, as deaths have occurred from its administration. In a dose of twelve to fifteen grains, although divided into three portions, it acts as a corrosive poison; in smaller quantities it lowers the temperature without acting beneficially on the course and symptoms of the malady.

Nitrite of Amyl. *(British Med. Jour.*, Jan. 27, 1877.*)* —Mr. W. Lemon Lane, M. B., as the result of experiments upon kittens, publishes the following conclusions:

1. Amyl nitrite, when inhaled in small quantities, produces reddening of the face in man and of the nose and mouth in kittens; this action is due, according to Brunton, to the dilatation and overfilling of the arterioles.

2. Large quantities, by inhalation, produce in kittens cyanosis of the nose and mouth along with insensibility. The former arises from over-distension of the venous system, this being due to the engorged arterioles propelling the blood into the veins, while the insensibility probably arises from over-distension of the venous system and of the heart.

3. When inhaled in small quantities it produces recovery from chloroformic insensibility by dilating the arterioles of the brain, and thus removing the cerebral anæmia due to the chloroform.

4. When inhaled in large quantities, instead of producing recovery from chloroformic insensibility, it not only retards it but it may cause death by paralysis and over-distension of the heart and engorgement of the venous system.

5. It causes a rise of temperature when inhaled in small quantities, by the increased amount of blood in the arterioles causing an increased tissue change in the body.

6. In large doses (inhaled) it produces a fall of temperature.

7. It also helps to produce recovery from the chloroformic insensibility by raising the temperature, which is always lowered by chloroform, and by removing the paralysis of the heart due to chloroform; this action is well seen by the nitrite of amyl making the heart's beat fewer and its sounds louder.

8. Death is caused chiefly by paralysis of the heart, which is shown by all its cavities being distended and by engorgement of the venous system.

The Actual Cautery in Spasms, Paralysis and Epilepsy. (*Eugene Dupuy, M. D., New York Med. Jour.*, Jan. 1877.)—The doctor gives the notes of a few cases of confirmed chronic disease which he treated with success by applications of the actual cautery, after all other remedies had failed to bring about any

improvement. The patients previous to and during the treatment, were in the wards of Dr. J. J. Mason, at the Hospital for the Paralyzed and Epileptic, on Blackwell's island. It is to be noted that all the patients had tender, sometimes hyperæsthetic, spots along the spine. In the cases of spasm the cautery was applied over the affected muscles, while in the epileptic and paralytic cases it was passed along both sides of the spinous processes of the vertebræ. The applications are made once every two to four days, and manifest improvement or cure should be present before the tenth seance. The rules for treatment are those of Dr. Brown-Sequard:

1. The instrument has to be heated to whiteness.

2. It must be shaped like an olive (blunt end).

3. It must not be allowed to burn the skin, but is passed rapidly along the space to be acted upon, so that, after the operation is over, nothing is seen but a *white line*, resembling greatly a scratch with a finger nail.

So applied, it is never painful. Hence there is no necessity of first applying ether spray on the spot to be cauterized, as the former is more painful than the latter, and, moreover, mars the good effects of the application of the instrument, as the object of the operation is to act on the terminations of nerve fibres in the skin, but not to destroy them.

JABORANDI. (Drs. O. Kahla and J. Soyka, *Centralb. f. d. Med. Wissensch, No. 31. Journal of Nervous and Mental Diseases.)*—Dogs and rabbits were experimented upon in order to note the action of jaborandi upon the heart, and the preparations employed were infusions of the beans injected into the veins. The results were:

1. Small doses (5 cgm.) caused an immediate and rather transitory depression of the blood pressure, with simultaneously appearing and disappearing quickening of the pulse.

2. Larger doses (10 ccm.) have the same but more lasting effect, but, on the other hand, the slight quickening of the pulse at the commencement is followed by a slowing simultaneously

with the rise of the blood pressure. At the same time a notable increase of the fulness of the pulse is remarked.

3. Large doses (20 ccm.) produce a deep and lasting decrease of the blood pressure, and an immediately appearing marked slowing of the pulse. The increase in volume of the pulse is very noticeable.

4. With the size of the dose the duration and intensity of the symptoms also increase; still they generally disappear.

5. The cause of the phenomena here observed is probably an irritation of the cardiac terminations of the vagus. This is indicated by:

6. The appearance of the symptoms unchanged after section of both vagi; and

7. Their complete disappearance after the cardiac terminations of the vagi had been altogether paralyzed with atropia.—*(The Clinic,* Jan. 20, 1877.*)*

Action of Hyoscyamine and its Resemblance to Atropine. (J. Sydney Pearse, *Lancet,* Nov. 1876).—The solution employed was of the strength of one grain of the crystalline hyoscyamine to two drachms, a solution similar to the liq. atropine of the B. P.:

1. An application, painted upon the skin, like atropia, relieves pain. It produces neither redness nor anæsthesia.

2. When applied to the skin around the eye, neither dilatation nor any alteration of vision results. In this it differs from atropia.

3. When applied to the conjunctiva, like the latter, it causes an equally great and continuous, but not so rapid, dilatation of the pupil. Fifteen minutes are required for the complete manifestation of its action.

4. The duration of dilatation varies from two to twenty-one days.

5. In no case, to produce this action, is dilatation of the opposite pupil or constitutional effects produced.

6. A subcutaneous injection of 1-60 grain, like atropia, gives rise to great dryness of the skin, mouth and pharynx;

great thirst; flushing of the face; conjunctival injection, mydriasis, loss of the power of accommodation of the eye; increased frequency and fulness of the pulse, and sometimes a rise in temperature of one depree.

7. The increase in the frequency of the pulse is not so great as that caused by atropia, as 50–60 above normal have been recorded for the latter, while only 36 were noted for hyoscyamine.

8. The mind is not affected nor is there any delirium.

9. Unlike atropia, no unsteadiness of the gait is produced by the former.

10. The effects of hyoscyamine upon the secretion of urine are dissimilar to those of atropia, as its amount is not increased.

Physiology.

Quantitative Estimation of Urea. (*New York Medical Journal*, June, 1877.)—Dr. G. B. Fowler, of the College of Physicians and Surgeons, New York, reports a new method for the quantitative estimation of urea, which recommends itself by its exactness, simplicity and necessity of few instruments. Dr. Robert's plan of determining the amount of sugar in a solution merely by the difference in specific gravity before and after fermentation, suggested the idea that the difference in specific gravity before and after decomposition by the hypochlorites or hypobromites should bear a definite relation to the quantity of urea originally present in the solution. Numerous experiments and comparisons of results with those obtained by Liebig's method, demonstrated that Dr. Fowler was correct and he accordingly recommends the following procedure: by preliminary experiments upon solutions of pure urea, he determined that *every degree of density lost indicates 7.791 milligrammes of urea per cubic centimetre of the solution (3.55 grains per ounce).* Now take two glass cylinder jars, one about nine inches in height by one and a half in diameter and the other about seven inches by one inch. Into the smaller pour a quantity of urine and take its specific gravity. Pour one half ounce of it (15 c. c.) into the

large jar. Wash the smaller jar thoroughly and in it take the specific gravity of the hypochlorite solution. Add to the urine in the large cylinder exactly seven times as much hypochlorite as there was urine taken. With the mingling of the two fluids, brisk effervescence arises and care must be taken that none of the mixture be lost. After a time this diminishes and now by vigorously shaking the jar at short intervals, at the expiration of an hour the decomposition is complete. Now take the gravity of the quiescent solution, deduct from what it was before decomposition and estimate the amount of urea on the basis given above: e. g. sp. gr. urine 1020 and that of the hypochlorite 1045. But the mixture effervesces, therefore for its sp. gr. we must resort to the law of proportion:

1 part at.....	1020	1020
7 parts at.....	1045	7315
8		8335

1041⅞ sp. gr. of mixture.

Substracting from this the sp. gr. after decomposition, say 1038⅞, we have a loss of 3°. Every degree of loss equals 7.791 milligrammes per c. c. of urine used. Therefore, the urine contained 23.373 milligrammes of urea per c. c. The temperature of the fluids should all agree when their sp. gr. is taken. Suibb's liq. sodæ chloriñatæ should be employed.

Respiratory Sounds, Normal and Abnormal. (*Review Mensuille de Med. et de Chir*, March, 1877. *London Medical Record*, April 15th, 1877.)—Mm. A. Bondet and A. Chauveau made their experiments upon a young and vigorous mare attacked with pneumonia of the left side, attended with such alarming symptoms that death was thought imminent. Considerable increase of the natural inspiratory murmur was heard all over the right side; no sound with expiration. On the left, over the upper half, there was also exaggerated inspiratory murmur over the lower half; this murmur was completely abolished and replaced by a double tubular blowing sound. The inspira-

tory part of the tubular sound was longer and softer than the expiratory portion, which was louder but shorter. Auscultation of the trachea showed that the inspiratory and expiratory sounds heard over this tube, though louder, possessed exactly the same character as the tubular sounds heard over the consolidated lung, and an incision of the trachea in the middle of the neck, about 20 centimetres (8 inches) long, was then made, an opening giving free passage to the air during inspiration and expiration, allowing no air, or only an insignificant quantity, to pass by the larynx. Immediately after the operation the state of the animal was such as to render null any observation which might be made, as the amount of blood and mucus which had entered the trachea and bronchi caused a terrible condition of distress. The next day, however, the mare was not only alive, but better, and the physical signs were found precisely the same as before the operation, all rales having now disappeared.

1. Now, on listening over the hepatised portions of lung with the *trachea closed*, they heard the sounds already described; with the *trachea opened*, the inspiratory tubular sound disappeared and the expiratory sound was much shorter and weaker.

2. Exactly the same phenomena were observed on auscultating the trachea below the incision when this was *opened* or *closed.*

3. On auscultating the sound lung and the sound portions of the diseased one, no alteration was observed in the natural respiratory murmur, whether the trachea were opened or closed; if anything the murmur was a little increased in intensity at the moment when the trachea was opened.

4. Sounds were artificially produced in the trachea by placing in it a caoutchouc tube through the lips of the tracheal wound and blowing through a membraneous reed fixed to its free extremity, thus imitating the conditions under which the voice is produced.

Over the diseased portion of lung the sounds were heard with the greatest clearness. Over the healthy portions the transmission of the sounds was wholly arrested. These experiments repeated always gave the same results. Afterwards,

when profuse bronchial secretion arose, the tracheal sounds would suddenly cease to be heard over the hepatised lung; at the same time there would be noticed entire absence of the tubular or any other breath sound; but if the animal coughed or expectorated, all the tracheo-pulmonary acoustic phenomena returned as clearly as before.

MM. Bondet and Chauveau draw the following conclusions;

1. In the horse, healthy lung tissue is a very bad conductor of sound.

2. The normal inspiratory murmur originates in the lung tissue itself; it arises where it is heard. From other experiments they conclude that it is caused by the entrance of air into the infundibules.

3. Hepatised lung tissue is a good conductor of sound, since it brings clearly to the ear, applied to the chest, the sonorous vibrations artificially produced in the trachea.

The mechanism of this conduction is thus analysed:

1. The vibrations are transmitted to the pulmonary parenchyma, not by the walls of the air tubes, but by the air contained in them.

2. Arrived at the ultimate ramifications of the bronchiæ, these vibrations are conducted to the ear by the pulmonary tissue and the chest wall.

3. The tubular sound heard over hepatised lung is a transmitted sound, originating at a distance from the spot where it is heard.

4. The tubular breath sound of pneumonia and tracheal sounds are the same phenomena heard at different spots, and alike produced by the passage of air through the aperture of the glottis.

The Nerves of the Spleen. (*Centralblatt. London Lancet*, March, 1877.)—Bulgak, in a recent paper, supplies some interesting particulars in regard to the origin and distribution of the splenic nerves. The experiments were made upon dogs partially narcotized by morphia or chloroform. The abdomen was opened by a crucial incision, the spleen carefully uncovered

and the intestines and abdomen generally were covered with soft linen cloths dipped in an artificial serum. The nerves surrounding the vessels were then excited by a weak galvanic stimulus.

The splenic nerves are of two kinds, centripetal and centrifugal, for on excitation of the central extremity of one set of divided nerves, well marked general reflex contractions of the spleen occurred, and if the animal at the moment was at all sensible it gave indications of pain by its movements and cries. No such results followed excitation of the distal extremity. Irritation of the centric extremity of the other divided set caused no contraction or indication of pain, whilst irritation of their distal extremity induced contraction of the spleen, limited to the part to which the nerve was distributed. Excitation of the nerves generally caused the spleen to become harder, paler and more granular on the surface than natural. By a method of exclusion he has demonstrated that all the motor and sensory fibres of the spleen run in the great splanchnic nerve of the left side; division of this nerve causes all signs of the reflex action to disappear. Thus he found that the reflex centre for the spleen was not in the cœliac ganglion, as has been supposed, and accordingly he examined the spinal cord.

From his experiments he concludes that the splenic centripetal and centrifugal nerves enter the cord as low as the eleventh dorsal vertebra, and that they ascend in the cord to a sensori-motor centre situated in the cord between the fourth and first cervical vertebræ. Most probably its vaso-motor nerves proceed from the same source.

The number of white blood corpuscles issuing from the spleen is greatest during the ordinary non-contracted condition of the organ; it diminishes on its contraction and attains its minimum during the period of return to the normal state. If, however, the spleen were made to contract after it had been previously swollen by ligature of the veins, the number of leucocytes contained in the splenic venous blood underwent great augmentation.

THE BIOLOGICAL POSITION OF THE PHOSPHATES. (*La France Medicale, Pac. Med. and Surg Jour.*, June 1877.)—M. Joly presents the following propositions as the result of his inquiries on the subject :

1. The organism contains five different species of phosphates; the phosphate of iron in the red blood corpuscle, the phosphate of sodium in the liquor sanguinis, the phosphate of potassium in the nervous system, magnesium phosphate in the muscles, and calcium phosphate in the bones.

2. The presence of the phosphates is intimately connected with all the vital acts; they preside over the nutritive phenomena and muscular activity, and have depending upon them the manifestations of intelligence.

3. Sickness or disease and dephosphatization are inseparable terms.

4. The phosphates have one principal biological function, which is identical with them all and which consists of a stimulation by means of the phosphoric acid which they continually set free by their decomposition.

5. They have secondary effects due to the nature of their bases, according to which they act as a mechanical support for living tissue, as agents in the production of physical liquefaction or solidification, and as chemical solvents.

6. The biological importance of the phosphates is proportionate to the quantity which is contained in the red blood globule.

COMPRESSED OXYGEN. (*L' Union Medicale*, June 9th, 1877.)—M. Paul Bert, recently read the following interesting communication before the Academie des Sciences, Paris: Some years since I published the fact that compressed oxygen would cause the death of all living beings subjected to its influence; in a word, of all anatomical elements, whether isolated, as the corpuscles in the blood or microscopical entities, or grouped in tissues, forming the complex organs. Directing my attention particularly to the various phenomena comprised in the name of *fermentation*, I discovered that all those whose appearance

depended upon the presence of a living being (putrefaction, acetification of wine, alcoholic fermentation, etc.,) were arrested by even the transitory action of compressed oxygen, while fermentation due to the action of some dissolved substance (diastase, pancreation, myrosinie, emulsin, etc.,) resisted its influence perfectly. Applying this new method of analysis to the study of problems which are to-day still subjudice among physiologists, I have made numerous experiments whose results I wish to report to the Society.

Maturing and over ripening of fruit.—Experiments show that fruit, which can mature after being separated early from the tree, if subjected to the action of compressed oxygen for several hours after its removal, can be indefinitely preserved and will not become any riper or go on to the stage of rottening; on the other hand, fruit, which attains that stage of over ripeness in which only it is fit to be eaten, will undergo that process, although subjected to the action of compressed oxygen and in fact with greater rapidity than when left in the open air. I conclude from these facts that: 1. That ripeness is the result of a cellular evolution; 2, that over-ripeness is due to either the action of a soluble ferment manufactured anteriorly by the cells of the fruit, or to a direct oxidation of certain substances.

Venoms.—The venom of the scorpion was employed. This poison, whether liquid, or dried and redissolved in water, resisted perfectly the action of compressed oxygen. We know already that the venomous poisons owe their action to chemical substances, comparable to the vegetable alkaloids.

Surgery.

Insufflation as an Auxilliary Method in Surgical Operations. (*Philadelphia Med. and Surg. Reporter. Ohio Med. Recorder*, June, 1877.)—Unfortunately Esmarch's bloodless method cannot be employed for operations upon the trunk and neck. Dr Montes de Oca offers the following substitution, of which he has frequently successfully made use in the extirpation of tumors. A trocar is first introduced through the skin into the connective tissue in the vicinity of the tumor to be removed,

the stylet is withdrawn and the tube of a pneumatic pump connected with the canula, when two or three strokes of the piston will generally be found sufficient to cause the tumor to float on the distended cells. If the tumor be very large it may be necessary to insufflate from two or more points. The precaution should always be taken to compress the tissue at a certain distance from the tumor, in order to prevent the air from passing too far from the tissues. After this preparatory operation is completed, the surgeon cuts the integument covering the tumor with his bistoury, and then terminates the operation with his finger or with the handle of the instrument.

Alterations of the Sight in Typhoid Fever. (*L' Union Médicale*, June 12, 1877.)—Dr. Galezowski, of Paris, in a stated meeting of the "*Société Médical d'èmulation*," read an interesting paper upon the above subject. His observations have been taken during a number of years in the Parisian hospitals and in private practice, but more particularly during the late epidemic, which has carried off so many victims in the French capital. In closing his address he draws the following conclusions:

1. Typhoid fever may have some consecutive visual troubles; among which are, corneal ulcers, emboli of the orbital or retinal vessels and peri-nephritis of the optic nerve.

2. In consequence of the general weakness of the muscular system following typhoid fever, weakness of the power of accommodation can manifest itself, for the first time, in hypermetropic eyes.

3. Ocular accidents in typhoid fever are relatively very rare.

4. To overcome the corneal ulcers the eye should be immediately occluded.

(These ulcers he considers, from the experiments of Hauser, as being caused by an affection of the fifth pair, impairing the nutrition of the cornea. Trousseau believed that they were owing to the constant exposure of the cornea, and hence the treatment which he advised, of closing the lids; but Hauser has shown that necrosis of the cornea will not take place even after section of the fifth pair, if the lids are kept closed.)

In a more advanced stage he advises paracentesis.

Extraction of Foreign Bodies from the Œsophagus in Children. (*Bull. Gen. de Therap.*, 1877, p. 226. *Phil. Med. Times*, June 23, 1877.)—Dr. Thourmin lays the child face downwards on a table with its head projecting over the edge and sustained by an assistant. Then the finger being introduced to depress the tongue, the coin or whatever it may be glides along the finger of the operator and falls to the ground.

Treatment of Carbuncle by Blisters.—(*Gaz. des Hop.*, Sept. 14, 1876. *Med. Times and Gaz.* Nov. 18, 1876).—M. Jules Guerin says that the most efficacious mode of cutting short the progress of a carbuncle and hastening its cure is to cover the whole of the inflamed part with a large blister, having a hole in its centre to admit of discharges. The blister must remain until complete vesication has taken place and any portion of the carbuncle over which this has not been done, will remain hard and resistant. When the blister has taken effect, the pain is at once relieved and the redness and resistance of the tumor disappear and it becomes benign and inert, its enucleation proceeding under the use of ordinary means, without the aid of the bistoury. When after the discharge of its contents, a deep excavation remains, it is useful to apply to the walls a solution of nitrate of silver, with the object of obliterating the open vascular orifices and impeding the absorption of the diseased fluid. (*Abstract Med. Science*, Feb. 1877.)

Editorial.

Notice to Correspondents, Etc.—Communications intended for publication, and books for review, should be addressed to "Editors of Detroit Medical Journal, care of E. B. Smith & Co., Detroit."

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A Case of Death following Vaccination.

The following from the *Philadelphia Medical Times*, is of peculiar interest in connection with a case which recently occurred in this city, and which has created considerable excitement among the laity and no little comment among the profession. The case referred to was that of a child which had been vaccinated during the recent general vaccination ordered by the

Board of Health. As usually happens when conclusions are jumped at and opinions are expressed without a proper weighing and consideration of the data presented, there has been a great diversity in the opinions expressed by those physicians who were called to give expert testimony. The facts, however, as collated, go to show that the child was vaccinated with bovine virus and that in about a week after the operation there appeared an eruption which covered the whole or greater part of the body, and which so closely resembled the eruption of scarlatina as to lead several of the physicians who saw the case to pronounce it the latter disease. Others, however, who either did not see the eruption at its height or saw the child after the eruption had entirely disappeared, expressed themselves most unequivocally to the effect that septicæmia and not scarlatina was the cause of death. Not having seen the case we are not prepared to give an opinion as to the correctness or incorrectness of either of these diverse views, but cannot refrain from inclining towards that which refers the cause of death to septicæmia, and the quotation which we make below, we think, goes no small distance towards corroborating this view. The testimony, moreover, as given at the coroner's inquest, fails to show any possible source of contagion for scarlatina, unless possibly the vaccinator's knife could have carried it; at all events there was no scarlatina in the immediate vicinity or indeed in that quarter of the city. With the thermometer in the nineties, unless more than ordinary precaution was observed to keep the virus from undergoing change and the knife free from decomposing matter, we do not think it at all impossible that septicæmia was the cause of the child's death:

M. Terrillon (*La France Med.*,) contributes notes of a case of this kind, to which are added reflections on the conditions in general. He cites Verneuil as giving the following conclusions in a work published by him in 1868. 1. In pyæmia the skin may become the seat of various eruptions. 2. This symptom is rare, judging from the silence of authors. 3. It is the herald of approaching death. Braidwood, in his work on pyæmia, published the following year, gave considerable space to a description of these eruptions, laying particular stress upon a variety

resembling erythema. It is characterized by a redness of the skin invading the limbs and trunk, and of a bright red color. After having lasted five to eight hours, it disappears. In general it shows itself on the third to fifth day after the first chill. This eruption corresponds with the scarlatiniform rash of the French. Various other authors subsequently published cases, an analysis of which shows, according to M. Terrillon, that these eruptions may be classed under two heads; one class supervening upon surgical operations, especially those performed about the urinary passages. These are very various in form, ranging from simple erythema to the most marked pustules. The other class appear in the course of purulent infection or septicæmia. The latter are less various in appearance, the scarlatiniform variety being most common. T.'s case, of which notes are given, was that of a man who had been severely burned. Six days later he had a very slight chill, and on the following day a diffused, raspberry-colored, scarlatiniform eruption appeared on the thighs and abdomen, which spread gradually over the remainder of the body. The temperature, which had increased very slightly during the evolution of the eruption, rose on the ninth day, from which time the patient showed evident signs of pyæmia. The eruption became much lighter toward the end, except in the neighborhood of the trunk, and the patient died on the fourteenth day.

Microscopic examination of pieces of the diseased skin, taken away the evening before the patient's death, showed no signs of inflammatory change—only congestion.

T. considers his case particularly interesting from a prognostic point of view, because the eruption appeared some time before the first sign of purulent infection. The fact of a previous chill having occurred was not noticed by the patient, who only remembered it after questioning. The fact that the eruption appeared the next day after the chill, instead of four or five days, as in Braidwood's cases, is also of interest.

The question of scarlatina need scarcely come up in these cases, since all other symptoms of this affection are wanting. Nevertheless, Terrillon prefers the term scarlatiniform to designate this eruption, rather than erythema, employed by Braidwood, on account of its appearance and mode of evolution. The scarlatiniform eruption described by Forget, Smith and See as occurring in children operated upon during an epidemic of scarlet fever, Terrillon regards as nothing more than the latter itself, unchanged in any essential characteristic. Terrillon concludes with Verneuil that when after a surgical operation or a traumatic lesion a scarlatiniform eruption appears, pyæmia is to be feared. When this eruption has been preceded by a chill, however slight, the prognosis is extremely unfavorable.

J. J. M.

Professor Abram Sager, M. D.

Dr. Sager died at his residence in Ann Arbor, August 6th, 1877, from phthisis, complicated, near the end, with disease of the kidneys and with dysentery.

Born at Bethlehem, Albany Co., N. Y., December 22, 1810, he was educated at the Rensselaer Polytechnic Institute, graduating in 1831. At this school he was under the instruction and inspiration of Professors Torrey and Eaton, men noted in the study of botany and zoology. Thus was developed a taste for these studies, which he cultivated with such eminent success throughout much of his after life. His medical studies were pursued at Albany and New Haven, Conn., under the guidance of Professors Marsh and Ives. He attended lectures at the Albany Medical School and at Castleton, Vt., graduating at the latter institution in 1835. He settled first in Detroit, then he lived for a few years at Jackson, and finally located at Ann Arbor, where he has lived for over thirty years.

In 1838 he married Sarah E. Dwight, daughter of Darius Dwight, of Detroit. Of the eight children born to them, five are now living, three sons and two daughters. In 1837 he received the appointment of chief in charge of the botanical and zoological departments of the Michigan state geological survey. The zoological specimens, which were the basis of his report in 1839, laid the foundation of the present zoological collection in the University museum.

His botanical collections were also important and of great value. The Sager herbarium, now in the University museum, contains 1,200 species and 2,000 specimens. These were collected in New England and the West. He also prepared and placed in the medical museum a valuable collection illustrating comparative craniology, neurology and embriology of the vertebrata. From 1842 to 1855 he was professor of botany and zoology in Michigan University. In 1848 he was appointed to the chair of the "Theory and Practice of Medicine," and in 1850 that of "Obstetrics and Diseases of Women and Children" in the medical department of the University. This latter po-

sition he continued to hold till 1875, the last four years as Emeritus professor. For several years he was dean of the medical faculty, and held the position after failing health compelled him to relinquish the work of teaching.

Dr. Sager was a member of the American Association for the Advancement of Science, of the Academy of Natural Science of Philadelphia, and the Academy of Science of Chicago; of the American Medical Association; of the New York State Medical Society and of the Obstetrical Society of Philadelphia. He is the author of a variety of papers in the *Peninsular Journal of Medicine* and Detroit *Review of Medicine*, besides papers in the *American Journal of Science*, and in the Proceedings of the Academy of Natural Sciences at Philadelphia. After the death of Dr. Eaton, he was tendered the presidency of the Rensselaer Polytechnic Institute, but did not accept.

In 1876 Dr. Sager was unanimously elected president of the Michigan State Medical Society. For many years he was an active member of the Board of Education of Ann Arbor.

It will not be forgotten that Professor Sager's success as a teacher was attained in spite of certain natural defects. Neither his voice, his physical appearance or his temperament were favorable to public teaching, yet his other excellencies were such that, although surrounded by teachers possessing the natural gifts that he lacked, he steadily retained his hold upon the students of the University for more than a quarter of a century, until his resignation.

Thus we have recalled some of the leading historic facts in the life of our departed professional brother. His pupils and friends who shall read these lines will be able to recreate a living picture of their old preceptor and friend. One knew him at one period of his life, another at other periods; one knew him in one relation, another in other relations. But in all, his essential character was the same. His industry and persistence alone enabled him to complete those magnificent botanical and geological collections. While a boy he began the study of botany and zoology, and as opportunity offered he continued the study, even late in life. So, too, in his literary work—

persistent study rendered him one of the most profound medical and scientific scholars of our day. No one who ever met him will fail to remember the great modesty that, as a veil, covered his entire life—its thoughts, its words and acts. His sterling integrity and his self-sacrificing devotion to what he regarded as right were never questioned, and we trust they may ever remain a bright beacon to guide the earnest seeker for truth. In his death the profession has lost one of its truest, noblest, and most incorruptible members. L. C.

For facts contained in this notice we are indebted to a number of sketches in the daily press of Detroit.

Memoranda.

Messrs. Wm. R. Warner & Co. gave their entire Vienna exhibit to the Egyptian army.

In the city of Lansing, Mich., the mortality at annual rate in 1,000 for April was 5.32; for May, 10.24; for June, 1.32; for July, 2.53.

On his death bed William Hunter turned to his friend Dr. Combe and said, "If I had strength to hold a pen I would write how easy and pleasant a thing it is to die."

Within two months Professor Bilroth has operated twice for the extirpation of the spleen. The result in each case was the same—spleen removed and patient died.

The Canadian Medical Association holds its annual meeting at Montreal, beginning Sept. 12th. It is expected that the meeting will be of unusual interest.

The cinchonia plantations of the British government at Darjeeling, India, last year produced about fifty tons of the dry bark. This would supply over two tons of quinine and other cinchonia alkaloids.

In England the annual average of meat consumed per head amounts to 68 kilograms, in other countries only to 20; with

this is correlated the greater frequency of calculus, gout and aneurism among Englishmen.

The New Orleans *Medical Journal* is to be changed to a monthly of eighty pages at five dollars a year. Its editors have become proprietors. Detroit *Medical Journal* furnishes eighty pages monthly for three dollars a year.

The following named gentlemen delivered their *forty-fifth* course of lectures in the Medical College of Georgia, viz., Lewis D. Ford, M. D., LL. D., Joseph A. Eve, M. D., Louis A. Dugas, M. D., LL. D., and Paul F. Eve, M. D. For nearly half a century they have been active professors.

The St. Louis *Clinical Record* affirms that the professional troubles in Arkansas arose from and live in the unethical, unprofessional practices which prevail among the "resident physicians at Hot Springs." Other facts from other sources tend to confirm the view that the "Hot Springs" keep a very considerable part of the profession at a boiling point.

Alpheus B. Crosby, professor of surgery at Dartmouth and professor of anatomy in Bellevue hospital, died August 9th, from apoplexy, after an illness of but two days. Formerly he had served as professor of surgery in Michigan University and Long Island Hospital Medical College. Aside from his strictly professional acquirements he was noted for his genial manners, and his rare faculty of telling apt stories and making after dinner speeches.

Prof. Nathan R. Smith died at his home in Baltimore, Md., July 3d, 1877. As he was born May, 1797, he was over 80 years old. Since 1824 he has been connected with some medical college as professor of surgery or anatomy. He is well known by his varied contributions to medical literature, especially in the departments of anatomy and surgery.

At its late session the Illinois State Legislature passed acts establishing a "State Board of Health," and a "Medical Practice Act." The Board of Health is to administer the latter act. This latter requires that all persons practicing medicine after

July 1st, 1877, shall either have been in practice more than ten years, or present a diploma to the Board or pass an examination before the Board. Violations of the law are to be met by adequate penalties. For all this work by the Board the sum of $5,000 was appropriated. The secretary only is to receive compensation for his services. It seems to us that if examinations are to be conducted and the entire medical practice supervised by this Board a more liberal compensation should have been allowed. In their main features the acts are good, and we wish them the fullest success. The trouble with such legislation is likely to be that these acts will be so tinkered by coming Legislatures as to become practically useless.

Business Brevities.

DETROIT MEDICAL AND SURGICAL INSTRUMENT WORKS.

A recent visit to our home institutions of the above nature revealed a very commendable spirit of enterprize on the part of their managers. It revealed also the additional fact that notwithstanding the prolonged period of financial depression which has been by no means unfelt by physicians, the patronage extended to our home manufacturers has been quite encouraging.

Mr. Kuhlmann, the veteran maker, has removed to his new and more commodious quarters at 222 Jefferson avenue. Mr. Kuhlmann is too well known to the profession of this state to require any words of commendation from us. His large experience and inventive genius have been of frequent aid to physicians in enabling them to adapt instruments to the anomalous cases which present themselves for treatment. His present stock is complete in its every department, and is scarcely inferior to any of a like nature in the country, and is certainly unsurpassed by any in the west.

The Detroit Electrical Works is an establishment but recently opened in this city. It is located at 207 Jefferson avenue, and although comparatively a new venture, presents unmis-

takable evidences of thrift. The instruments of its manufacture in which physicians are more particularly interested are its batteries for medical and surgical use. It manufactures the Byrne Improved Cautery Battery, which is probably as compact and efficient an instrument as is made. The instrument, however, upon which the manufacturers plume themselves is the Cleland Portable Physicians' Battery, and certainly for compactness, neatness of finish, and combined delicacy and power of the current it has just claims for favorable consideration. The works are superintended by a practical electrician who has his eye open to the wants of the profession, and who keeps abreast of the rapidly advancing science of electrology.

Book Notices.

Any book noticed herein may be had of E. B. Smith & Co., Publishers and Booksellers, Detroit, Mich.

THE MULTUM IN PARVO DOSE AND REFERENCE BOOK. By Dr. Henri Leonard, Detroit. Third edition. Revised and enlarged. Tenth thousand; pp. 100.

The previous editions of this little book have received very favorable comment from the medical press, and we have only to say of the present edition that it is an improvement on its predecessors. The fact that the work has within three years passed through three large editions is but another attestation of its worth.

ZIEMSSEN'S CYCLOPÆDIA OF THE PRACTICE OF MEDICINE, VOL. XV. DISEASES OF THE KIDNEY. Cloth; pages, 799. 1877. New York: William Wood & Co.

This volume was prepared by Profs. Carl Bartels and Wilhelm Ebstein. The former occupies five hundred and forty-three pages and the latter the remainder of the book. Bartels is well known for his observations embodied in previous pub-

lished papers. In the work before us he treats of "Structural Diseases of the Kidneys and the General Symptoms of Renal Affections," of "Diffuse Disease of the Kidneys," including hyperæmia, ischæmia of the kidneys and its results, "Acute Parenchymatous Nephritis," "Acute Parenchymatous Nephritis of Pregnancy," "Chronic Parenchymatous Nephritis," "Renal Cirrhosis," and "Amyloid Degeneration." More briefly Ebstein discusses the remaining kidney disorders. After a careful reading we are inclined to regard this volume as one of the best prepared and most important of the series thus far published. Renal disorders are very common, especially in connection with a large number of diseases. To be able, in any particular case, to read the disease correctly, requires an extensive knowledge, painstaking observation, and profound thought. Lacking such knowledge, observation or thought the practitioner will sadly fail in his work. Those seeking further aid in their study of these disorders will do well to carefully digest the contents of this volume.

We can only call attention to a few of many topics here discussed.

Bartels says it is certain that "the combination of albumen with urine is in every case evidence of pathological conditions." "In every case the explanation of the excretion of albumen by the kidneys must be sought for in disturbances of the processes by which the secretion of urine is itself effected." "The overflow of serum albumen from the blood vessels into the renal tubes of the kidneys will, in every instance, be proportioned either to an existing abnormal increase of the blood pressure or to an altered state of the walls of the vessels or to a combination of both of these causes acting together." "Thus perfectly healthy kidneys, solely in consequence of an altered state of blood pressure upon their vessels, can excrete albuminous urine."

But all diseases of the kidneys do not give rise to albuminuria. Thus in the deposition of tubercle it is for the most part absent. The albumen in localized affections of the kidney is always scanty, evidently because only a small vascular territory

admits of its escape, and because the small increment thus added is mixed with the entire product of secretion furnished from both organs.

Respecting the cylindrical objects called casts Bartels says that while they are never shed in perfect state of health they certainly ought never to be accepted as certain evidence of structural alterations in the kidneys, nor, on the other hand, are they always observed in kidney disease. As a rule the appearance of any cast is associated with the excretion of albumen in the urine.

He adopted the view of the earlier authorities, viz., "that hyaline casts originate in the coagulation of some albuminous substance excreted together with the urine."

The slight differences in many casts he regards as brought about by metamorphoses in the casts experienced between the time of their formation in the tubules and the time when they are removed by the urinary secretion. Thus the original homogeneous transparent casts become granular, fatty, etc. While casts indicate renal albuminuria they do not indicate the nature of the causes at work in producing the albuminuria. Still they assist in unraveling such causes. Thus urine which contains a great number of pale or dark red granular casts comes from an inflamed kidney. If we find many undamaged epithelial cells from the uriniferous tubules cleaving to these pale casts and there is an abundance of red or white blood corpuscles and few or no dark granular casts we may conclude that the case is one of acute nephritis. If the dark granular and puckered casts prevail over the pale or hyaline ones the case is chronic nephritis.

Waxy casts indicate a chronic and deep seated renal affection, never being present in recent cases of nephritis nor in transient albuminuria.

The etiology of uræmia is discussed at length and the many theories fairly stated, but Bartels thinks that to solve it we must obtain "further and more minute clinical observations, fuller and more complete analyses of the blood of uræmic patients, more accurate investigations into the chemical composition of

the interstitial serous fluids, especially of that found in the brain. Thus we may perhaps prove that symptoms which we have accepted as the results of one and the same cause have been brought about by a variety of different ones." It is certainly established that the symptoms are all caused by some disorder of the urinary secretion and that the title of uræmia is rightly attached to them."

Bartels does not believe that in scarlet fever there is a process of desquamation of the renal epithelium with attendant albuminuria, just as there is a rash on the skin which is succeeded by a peeling of the epidermis. In most cases of scarlet fever albumen never occurs in the urine, nor in the entire course of the disease can one discover either renal epithelium or its fragmentary debris in the sediment of the urine. Still he believes that this post scarlatinal disturbance is kindled by some specific influence. The nephritis which follows scarlatina or diphtheria differs from that arising from cold in that the cases all die or get well in a short time, three months at farthest.

He emphatically states that in his experience when chronic parenchymatous nephritis does not lead to secondary atrophy of the kidney it does not cause hypertrophy of the left ventricle of the heart. If persons die before secondary atrophy begins, there is no hypertrophy of the left ventricle.

With the renal atrophy the general nutrition of the patient improves; cause, the hypertrophy of the ventricle causes a better blood supply to the general tissues.

The clinical and other evidence brought frought forward as illustrating or proving the doctrines advanced are a valuable feature of Bartels work.

Unquestionably it is the best work on kidney diseases that it has been our fortune to meet.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI. 1877. Paper; pages, eighty.

This representative of the profession in the great state of Missouri is composed of just eighty-seven members. Surely we ought to expect a larger membership in such a state.

The papers are mostly short. The president's address, by Dr. Trader, discusses Preventative Medicine, the Social Evil, Medical Education and Medical Ethics. Dr. Higgins treats of Animal Vaccination. Dr. Spencer of Danger to the Middle Ear from the Local Application of Fluids to the Naso-Pharyngeal Space. Dr. Broome of Subcutaneous Division of the Femur. Dr. Richmond of Surgical Dealings with Sphincter Muscles. Dr. Glasgow of Cancer of the Larynx. Dr. Porter of Syphilitic Phthisis, and Dr. Allen of Summer Complaints of Children.

Meteorological Report of Detroit for July, 1877.

BY C. HENRI LEONARD, M. D., OBSERVER FOR STATE BOARD OF HEALTH.

BAROMETER.—Highest, 30.277; lowest, 29.506; range, .769; daily mean, 29.906.

TEMPERATURE.—Highest, 90; this was on the 26th; lowest, 54; (This was on the 7th) range, 36; daily average, 72.5. As before stated, account must be taken of the heat reflected from buildings and pavements, in order to get the *street* temperature. The figures given show the absolute temperature of the air 65 feet from the pavement, with the thermometer sheltered from sun, wind or rain. Some eight or ten degrees more should be added for street temperature.

It has been a *hot* July, although higher temperatures have been recorded than the highest this month; yet the average temperature is from one to two degrees higher than the average of preceding Julys, except that of '76, then the average was ½ degree higher than this month. The hottest July temperature we have had was in '74; the thermometer then registered 97°, yet the daily average was over a degree less than this July. The lowest July temperature was in '73; it was then 50 degrees; though the highest for that year was some four degrees higher than the highest for this year. The daily average that year was 70.5.

WINDS.—Prevailing direction, s. w., as last month, (13 days s. w.). Greatest velocity, 25 miles per hour; total number of miles traveled, 4,203, a loss of some 249 miles over last month. At three observations "calms" were noticed.

CLOUDS.—Cloudy days, 5; clear, 13; rainy, 11; a gain of six clear days over last month, and six less rainy days.

RAINFALL.—Total precipitation, 1.57 inches. The highest precipitation was on the 10th; then .87 of an inch of water fell. It has been an exceedingly *dry* month, less than one-half of our usual amount of rain fall has occurred. In '73 we had a precipitation of 3.38 inches; in '74 of 3.65 inches; in '75 of 3.73 inches; in '76, 5 94 inches. The rain-fall of last month was over three times that of this month.

MOISTURE.—Highest absolute humidity was at the evening observation of the 28th; then there were 8.66 grains present in each cubic foot of air. The 25th and 26th also had observations when eight (or over) grains were present. These were our "oppressive" days, when every one was growling "O, how hot!" when the fact of the case was we had just as hot weather along the first of the month (the 8th) with some two (nearly) grains of moisture less in the air, and the heat was then not so much noticed. The daily mean of the 8th, 9th, 15th, 29th and 31st was greater than that of the 25th and 26th, the "oppressive" days just noticed. The highest relative humidity was on the morning of the 28th, though the highest "absolute" was on the evening of the same date, when the "relative" was 82 per cent. The next highest "relative" (94 per cent.) was on the evening of the 16th, when the absolute was 7.15 grains. At 13 other observations the "absolute" was higher than this, though the "relative" was much less than 94 per cent.

OZONE.—More this month than last. Greater coloration was noticed on a 24-hour exposure of the test paper was 2; this on the 19th. A thunder (or rather *lightning*) storm that evening. To No. 1 discoloration was noticed on seven other days.

HAZE.—The 12th, 13th, 14th and 15th were quite remarkable for this, though it was also noticed at the 2 P. M. observations of the 4th, 5th and 7th.

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PHILADELPHIA, 1876.

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ALTERATIVE. (Dr. C. C. Cox.) Dose, 2 to 4.	Mass. Hydrarg..... Pv. Rhei..... Sodii Bi. Carb.....aa. 1 gr.	.50
ANODYNE. Dose, 1 to 2.	Pv. Camphoræ .....1 gr. Morphiæ Acetat...1-20 gr. Ext. Hyoscyami.....1 gr. Ol. Res. Capsici...1-20 gtt.	.75
ANTI-PERIODIC. Dose, 1 to 3.	Cinchonidiæ Sulph...1 gr. Res. Podophylli....1-20 gr. Strychniæ Sul.....1.33 gr. Gelsemin .....1-20 gr. Ferri Sulph. Exs....1-2 gr. Ol. Res. Capsici...1-10 gtt.	.80
CAMPHOR ET EXT. HYOSCYAMUS. Dose, 1 to 2.	Camphoræ.....1 gr. Ext. Hyoscyami Eng .1 gr.	.50
CATHART.: Comp.,	U. S. P.....	.50
CATHART.: Comp., Vegetable. Dose, 2 to 3.	Podophyllin, Scammony... Ext. Colocynth..... Aloes, Soap and Cardamon	.50
CATHART.: Comp., Cholagogue. Dose, 1 to 3.	Res. Podophylli.....1-2 gr. Pil Hydrarg.....1-4 gr. Ext. Hyoscyami.....1-8 gr. Ext. Nuc. Vom....1-16 gr. Ol. Res. Capsici... 1-8 gtt.	.50
EMMENAGOGUE. Dose, 1 to 3.	Ergotine.....1 gr. Ext. Hellebor Nig....1 gr. Aloes Soc.....1 gr. Ferri Sul. Exs.....1 gr. Ol. Sabinæ.....1-2 gtt.	1.40
FERRI IODID.	Dose, 1 to 2 .....1 gr.	.80
FERRI ET STRYCHNIA CIT. Dose, 1 to 2.	Ferri Cit.....1 gr. Strych. Cit.....1-50 gr.	.75
IODOFORM ET FERRI. Dose, 1 to 2.	Iodoform .....1 gr. Ferrum.....1 1-4 gr.	2.50
NEURALGIC. (Brown-Sequard.) Dose, 1 Pill.	Ext. Hyoscyami....2-3 gr. Ext. Conii.....2-3 gr. Ext. Ignat Am.....1-2 gr. Ext. Opii.....1-2 gr. Ext. Aconiti.....1-3 gr. Ext. Cannab. I.....1-4 gr. Ext. Stramon.....1-5 gr. Ext. Bellad .....1-6 gr.	2.00

		PRICE PER 100
NEURALGIC. Dose, 1 to 2.	Quiniæ Sulph.....2 gr. Morphiæ Sulph....1-20 gr. Strychniæ.....1-30 gr. Acid Arsenious.....1-20 gr. Ext. Aconiti.....1-2 gr.	$3.00
OPII ET CAMPHORÆ ET TANNIN. Dose, 1 to 3.	Pulv. Opii .....1-4 gr. Camphoræ..... ....1 gr. Acid Tannic.....2 grs.	.80
PHOSPHORI	.....1-25 gr. 1-50. 1-100 gr.	1.00
PHOSPHORI COMP.	Phosphorus .....1-100 gr. Ext. Nuc. Vomicæ ..1-4 gr.	2.00
PHOSPHORI ET NUCIS VOMICÆ.	Phosphorus.....1-50 gr. Ext. Nuc. Vomicæ..1-4 gr.	2.0
PHOSPHORI ET FERRI ET NUC. VOM.	Phosphorus .....1-100 gr. Ferri Carb. (Vallet's), 1 gr. Ext. Nuc. Vomicæ..1-4 gr.	2.00
PHOSPHORI ET FERRI ET QUINIÆ.	Phosphorus .....1-100 gr. Ferri Carb. (Vallet's), 1 gr. Quiniæ Sulph.....1 gr.	2.90
PHOSPHORI ET FERRI ET NUC. VOM. ET QUINIÆ.	Phosphorus .....1-100 gr. Ferri Carb. (Vallet's), 1 gr. Ext. Nuc. Vom.....1-8 gr. Quiniæ Sulph.....1 gr.	2.90
QUINIÆ COMP. Dose, 1 to 2.	Quin. Sulph.....1 gr. Ferri Carb. (Vallet's) 2 grs. Acid Arsenious ...1-60 gr.	1.75
QUINIÆ ET FERRI ET STRYCH. PHOS. Dose, 1 to 2.	Quinia Phos.....1 gr. Ferri Phos.....1 gr. Strychniæ Phos....1-60 gr.	1.75
RHEI COMP. U. S. P. Dose, 2 to 4.	Pulv. Rhei.....2 grs Pulv. Aloes Socot..1 1-2 grs. Myrrh.....1 gr. Ol. Menth Pip.....	.75
SEDATIVE. Dose, 1 to 2.	Ext. Sumbul.....1-2 gr. Ext. Valerianæ .....1-2 gr. Ext. Hyoscyami... .1-2 gr. Ext. Cannab Ind...1-10 gr.	.75
TONIC. Dose, 1 to 2.	Ext. Gentianæ.....1 gr. Ext. Humuli.....1-2 gr. Ferri Carb. Sacch...1-4 gr. Ext. Nuc. Vomicæ..1-20 gr. Res. Podophylli....1-25 gr. Ol. Res. Zingiber..1-10 gtt.	.60
TRIPLEX. Dose, 2 to 4.	Aloes Socot.....2 grs. Mass. Hydrarg .....1 gr. Podophyllin..... ....1-4 gr.	.75
PODOPHYLLIN, COMP. Cathartic, Tonic. Dose, 1 to 2.	Podophyllin.....1-2 gr. Ext. Hyoscyam.....1-8 gr. Ext. Nuc. Vomicæ..1-16 gr.	.75

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PILLS AND GRANULES,

OF THE

U. S. PHARMACOPIA & OTHER RELIABLE FORMULÆ,

GELATINE-COATED,

Process and Machinery Patented.

91 & 93 Fulton, 80, 82 & 84 Ann Streets,

NEW YORK.

A physician in St. Louis, who has for some time been using our Pills, prescribed "Gelatine-Coated Phosphorus Pills, $\frac{1}{50}$ gr.," intending to have the McKesson & Robbins Pills dispensed, but did not perceive the usual effects after administering them to the patient. Upon investigation, he found the Pills resembled ours somewhat in external appearance, but on cutting one open, he found it contained hardly a trace of Phosphorus. The doctor went to the druggist, who had dispensed the prescription, and found that, not having our Phosphorus Pills in stock, he had dispensed an imitation; the druggist claimed that he was warranted in so doing, as the physician had not taken the precaution to put the name McKesson & Robbins upon his prescription, although the physician had been in the habit of specifying our pills, and the druggist knew it. We have had our attention called to several cases of this character, regarding the Quinine Pills, Morphia granules and others, when, on failing to obtain results, the physicians have found that they were being imposed upon by imitations; this has induced them to write "McKesson & Robbins' G. C. Pills" in full upon their prescriptions and add, "send no others." We have full lines of our Pills in all of the large, and in most of the small cities, and there is no excuse for substituting imitations.

McKESSON & ROBBINS' GRANULES, Gelatine-Coated.

Arsenious Acid ..... 1-50, 1-40, 1-30, 1-20 gr.
Atropia ..... 1-60 gr.
Corrosive Sublimate ..... 1-40, 1-30, 1-20 gr.
Digitalia ..... 1-60 gr.
This is prepared in our own laboratory and can be confidently relied upon.
Mercury, Bin-Iodide ..... 1-25, 1-16 gr.
Mercury, Proto-Iodide ..... 1-5, 1-4 gr.
Morphia, Acetate ..... 1-8, 1-4 gr.
Morphia, Sulphate ..... 1-16, 1-10, 1-8, 1-6, 1-4 gr.
Morphia, Valerianate ..... 1-8 gr.
Strychnia ..... 1-60, 1-40, 1-30 gr.
Sulphur, Iodide ..... 1-25, 1-10 gr.
Zinc, Phosphide ..... 1-6, 1-4, 1-2 gr.

Physicians have experienced the need of a reliable and pleasant form for administering these more potent remedies. The want of reliability, as exhibited in the granules of the market by the varying action following their administration, has caused them to be avoided—and very justly—by most practitioners, who have preferred rather to use solutions, and trust to the custom of dropping, or using a teaspoon to measure their portions, although nearly as uncertain, owing to great difference in the sizes of teaspoons; and the fact that drops vary with the conditions and form of surface, from which they flow.

In our preparations we have taken special precautions by enforcing our system of checking the weights, and, at large expense, have had our machines for division of the substances, so carefully and correctly constructed, as to insure an exactness never before maintained in this class of preparations. We can, therefore, afford assurance to physicians of correct weight and perfect division. Our granules have been appreciated and are being extensively used by the profession. Be careful and see that "McKesson & Robbins" is on the label.

Every drug and chemical used in McKesson & Robbins' Pills are thoroughly tested by a competent chemist, and the Pills repeatedly analyzed to prove correctness in the synthesis.

CAUTION!!—SPECIFY McKESSON & ROBBINS'.

Therapeutical Notes on some Specialties in McKesson & Robbins' Pills, (Gelatine-Coated).

PHOSPHORUS, ... 1-100, 1-50, 1-20, 1-12 gr.

The pure transparent Gelatine we use is in no degree porous, it preserves the Phosphorus perfectly in the free state; while Sugar, owing to its crystalline nature, is very porous and will admit of rapid change in substances, of a delicate character, covered with it. We have the Phosphorus in state of solution in the excipient we employ, this insures a gradual elimination of the Phosphorus in the stomach, thus avoiding the severe irritation that is so often experienced after taking the ordinary Phosphorus Pills, which are prepared by mixing the Phosphorus in substance with the excipient, in which small fragments of Phosphorus often remain. Note remarks by Dr. Squibb, in his paper before Am. Pharm. Ass'n, Sept., '76, in which he states that Phosphorus should never be administered in substance, and if a coating be used, he commends Gelatine.

Many of the most eminent Physicians throughout the country, among whom are leading specialists in the treatment of Neurotic diseases, assert that McKesson & Robbins' Phosphorus Pills are the most rational medium yet found for exhibiting Phosphorus.

PHOSPHORUS COMPOUND, McKesson & Robbins' Pills, both $\frac{1}{60}$ & $\frac{1}{100}$ gr.

PHOSPHORUS COMPOUND AND IRON, McKesson & Robbins' Pills.

ERGOTIN PILLS, ... 3 grs.

We manufacture our Ergotin with great care from the best quality of fresh, selected Ergot, and it contains in the most potent form all the active constituents of Ergot of Rye, each grain representing 10 grs. of Ergot, and each pill being equal to half a teaspoonful of officinal fluid extract. The value of Ergotin, in the place of the crude drug and the Fluid Preparations, is conceded; and it is being largely administered both in this country and in Europe. It has taken a prominent place in the treatment of Neurotic diseases. Many of our most reliable practitioners, and particularly those of extended experience in Gynæcology, assert that they have never found a preparation of Ergot, in which, by experience, they felt as much confidence as in McKesson & Robbins' Ergotin Pills. The advantages of prescribing it in this form will be readily acknowledged. (Dose, 1 to 3.)

We offer our Ergotin, prepared specially for hypodermic use, in one ounce bottles.

PHOSPHATES IRON, QUININE & STRYCHNINE PILLS.

Each pill represents an equivalent of about two teaspoonfuls of Elixir, and is a much more preferable form, in being more agreeable to take and not objectionable to the weakest stomach, when Syrup or Elixir are rejected. As a tonic, this pill is deservedly popular. We also offer Iron, Quinine and Strychnine Pills, the Iron being in the form of Quevenne's or reduced by hydrogen.

EXTRACT SUMBUL, (Musk Root,) ..... 1 gr.

This drug has for some time been extensively used in Russia, and for several years in England and America, in the treatment of hysteria and general spasmodic disorders, particularly in that class of cases where assafœtida has heretofore been much used. Those most experienced in its use claim that it possesses great merit. (Dose, 2 to 3.)

SALICYLIC ACID PILLS, ... 2½ and 5 grs.

Our pills present the best form for administering this now very important remedy, which has proved so efficacious in Rheumatism, and which is also extensively used as an Antiseptic and Febrifuge. It is claimed that the solutions, formed by the use of Sodium, Ammonium and other salts, produce combinations which do not represent the full value of the free Acid.

EXTRACT GRINDELIA ROBUSTA PILLS, ... 3 grs.

The Solid Extract is of our own manufacture and is ten times the strength of the Herb; it can be used much more readily and with better effect than any of the liquid preparations. The use of this remedy in Hay Fever, and all Asthmatic difficulties, has increased largely in the Eastern States and Europe, and its therapeutic value is conceded. (Dose, 1 to 3.)

EXTRACT GUARANA PILLS, ... 3 grs.

This Solid Extract is also manufactured in our own laboratory, and is many times the average strength of the drug. We offer these Gelatine-Coated Pills with confidence in their being the only accurate mode of preparing this widely used and much appreciated remedy, as the *drug* varies so much in strength; some preparations in the market have been found to consist largely of impurities. We carefully test each shipment we receive, and our Solid Extract is of superior and uniform quality. The value of Guarana, in many phases of sick, nervous and sun headache, as well as in Neuralgia, and in irritations of the mucous membrane, has become well known to practitioners, and its happy effects, in Diarrhœa, Dysentery and kindred diseases, have been attested in numerous cases. (Dose, 2 to 3.)

CAUTION!!—SPECIFY McKESSON & ROBBINS'.

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QUININE, SULPHO-CARBOLATE, ... 1, 2 and 3 grs.

This Salt of Quinine has been very much used in some of our extreme malarial districts during the past two years. Those, who have tested it very carefully, claim that it possesses a most positive specific action in the treatment of fever and ague, and has proved itself eminently superior to the Sulphate of Quinine in all malarial fevers.

PHOSPHIDE ZINC, ... 1-6, 1-4 and 1-2 gr.

The Phosphide of Zinc has been very successfully used by Drs. Hammond, (see Dr. H.'s last book,) Routh, and other prominent authorities on treatment of brain diseases, all of whom assert its efficacy. It has been used with remarkable results in severe cases of Neuralgia, (see paper by Dr. Adolphus, St. L. Med. Jour., XIII, 471). P. Vigier, *Bull. Gen. de Therap.*, states that Phosphide of Zinc is more prompt and reliable in its action than free Phosphorus.

PHOSPHIDE ZINC AND NUX VOMICA, (Hammond's formula.)

IODIDE OF IRON, (Blancard's formula,) ..... 1 gr.

Preferable to the Syrup and much more soluble and active than the imported pills, which are coated with a resin, and are usually very old before they reach the consumer.

MONOBROMATED CAMPHOR, ... 2 and 3 grs.

Is now being considerably used in treatment of Spermatorrhœa; strongly recommended in cases of Cerebral-Anæmia; used successfully in infantile Convulsions from teething; Hysteria, Headache from over study or nervousness and Nymphomania. (Dose, 3 to 4 grs.)

QUININE, SULPHATE & BI-SULPHATE, ¼, ½, 1, 1½, 2, 3, 4 & 5 grs.

McKesson & Robbins' Quinine Pills are well and favorably known, having displaced the use of other pills in New York and all parts of the country. The fact that they always yield more speedy and satisfactory results, and the ease, with which even a child can take them, have aided in making them the favorite pills. Several physicians have related to us cases—particularly of Diphtheria—where they found it impossible to administer the round pill, but the patients swallowed McKesson & Robbins' Pills without difficulty. We call special attention to our five grain Quinines, which, owing to form and nature of coating, are as easily swallowed as the ordinary two grain. Our Bi-Sulphate of Quinine Pills contain an additional equivalent of sulphuric acid, thus rendering the officinal sulphate much more soluble, a decided advantage over the ordinary Quinine Pills. See Am. Jour. Pharm., XXV, 202.

QUININE, CARBOLATE, ... 1 gr.

QUININE, SALICYLATE, ... 1 gr.

QUININE, VALERIANATE, ... ½ gr.

CINCHONIDIA, SULPHATE, ... 1, 2 and 3 grs.

Now coming into extensive use. McKesson & Robbins' Pills have proved the best form for administering it.

COMPOUND HYPOPHOSPHITES PILLS, (Lime, Soda, Potassa and Iron.)

Form the best possible medium for administering this remedy, which occupies so prominent a place for the treatment of lung diseases and bronchial affections.

DOVER'S POWDER PILLS, ... 2½ and 5 grs.

Affording an agreeable medium for the administration of this exceedingly nauseous compound, the value of these Pills will be readily seen by Physicians.

LACTO-PHOSPHATE OF LIME PILLS, ... 5 grs.

This form possesses many advantages over the Syrup. Used with much success in Dyspepsia.

PEPSIN, BISMUTH AND STRYCHNINE PILLS, ... 5 grs.

Representing this combination in the most agreeable and reliable form.

SOLIDIFIED COPAIBA WITH OLEO-RESIN CUBEB PILLS, ... 3 and 5 grs.

We prepare both these ingredients in our own laboratory, with great care, and can assert their superior quality. The value of the Oleo-Resin Cubeb often offered in market is very slight, due to the fact that the largest proportion is powdered Cubeb Berries.

Price Lists furnished upon application. See list of formulas, last page.

Private Formulas of 3,000 or more Pills, made and coated to order.

McKESSON & ROBBINS, 91 Fulton St., New York.

CAUTION!!—SPECIFY McKESSON & ROBBINS'.

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Formulas of McKesson & Robbins' Pills, (Gelatine-Coated).

Acid, Arsenious....1-50, 1-40, 1-30 and 1-20 gr.
*Acid, Salicylic....2 1-2 and 5 grs.
Aloes, U. S....4 grs.
Aloes and Assafœtida, U. S....4 grs.
Aloes and Iron....3 grs.
{ Pulv., Aloes, Soc., 1-2 gr.
Pulv., Zingib. Jam., 1 gr.
Ferri, Sulph., Exsic., 1 gr.
Extract, Conii, 1-2 gr. }
Aloes and Myrrh, U. S....
Aperient....
{ Ext., Nucis Vom., 1-3 gr.
Ext., Hyoscyami, 1-2 gr.
Ext., Coloc. Comp., 2 grs. }
Assafœtida....2 grs.
{ Assafœtida, 1 1-2 grs.
Pulv., Saponis, 1-2 gr. }
Assafœtida, U. S....4 grs.
{ Assafœtida, 3 grs.
Pulv., Saponis, 1 gr. }
Assafœtida and Nux Vomica....
{ Assafœtida, 3 grs.
Ext., Nucis Vom., 1-4 gr. }
*Atropia....1-60 gr.
*Belladonna Extract....½ gr.
Bismuth, Subnitrate....3 and 5 grs.
Blue Pill, U. S....1, 3 and 5 grs.
Calomel....1-2, 1, 2, 3 and 5 grs.
Camphor and Henbane....
{ Camphora, 1 gr.
Ext. Hyoscyami, 1 gr. }
*Camphor, Mono-Bromated....2 and 3 grs.
Cannabis Indica Extract....1-2 gr.
Cathartic Compound, U. S....
Cathartic Vegetable....3 grs.
{ Ext., Col. Comp., pulv., 1 1-2 grs.
Res., Podophylli, - - 3-8 "
Res., Leptandræ, - - 1-8 "
Jalapæ pulv., - - 1-4 "
Aloes Socotrin pulv. - 1-2 "
Ext., Hyoscyami, - - 1-4 "
Ol., Menthæ Pip. }
Chinoldine....1-2, 1 and 3 grs.
Cinchonia, Sulphate....3 grs.
Cinchonidia, Sulphate....1, 2 and 3 grs.
Colocynth, Comp. Extract....3 grs.
Colocynth, Ipecac and Blue....
{ Ext. Coloc. Comp., pulv., 2 grs.
Pulv. Ipecacuanhæ, 1-6 gr.
Pil., Hydrarg., 2 grs. }
Cook's....3 grs.
{ Pulv., Aloes, Soc. 1 gr.
Hydrarg., Chlor., Mite, 3-4 gr.
Pulv., Rhei., 1 gr.
Pulv., Saponis, 1-4 gr. }
Copaiba....3 grs.
Copaiba and Oleo-Resin Cubebs....3 grs.
{ Pil., Copaibæ, 2 grs.
Oleo-Resin Cubebæ, 1 gr. }
Copaiba and Oleo-Resin Cubebs....5 grs.
{ Pil., Copaibæ, 3 grs.
Oleo-Resin Cubebæ, 2 grs. }
*Corrosive Sublimate....1-40, 1-30 and 1-20 gr.
*Digitalia, pure....1-60 gr.
Dinner (Cole's)....
{ Pil., Hydrarg., 1 1-8 grs.
Pulv. Aloes, Soc., 1 1-8 grs.
Pulv. Jalapæ, 1 1-5 grs.
Ant. et Pot., Tart., 1-50 gr. }
Dinner (Lady Webster's)....3 grs.
{ Pulv., Aloes, Soc., 1 4-5 grs.
Pulv., Mastiches, 3-5 gr.
Pulv. Rosæ, Gallicæ, 3-5 gr. }
*Emmenagogue....
{ Ergotin, - - 1 gr.
Ext., Helleb., Nig., 1 gr.
Ferri, Sulph., Exsic., 1 gr.
Aloes, Soc., Pulv., 1 gr.
Ol. Sabinæ, 1-4 gr. }
*Ergotin....3 grs.
Ferruginous (Blaud)....3 and 5 grs.
{ Ferri, Sulphas.
Potassæ, Carb. aa }
*Grindelia Robusta Extract....3 grs.
*Guarana Extract (Paullinia)....3 grs.
*Henbane, Extract....1 gr.
Hepatic....
{ Pil., Hydrarg., 3 grs.
Ext., Coloc. Comp., 2 grs.
" Bellad., 1-4 gr. }
Hooper's....2¼ grs
Hypophosphites, Compound....
{ Calcii, Hypophos., 1 gr.
Sodii, " 3-4 gr.
Potassii, " 1-2 gr.
Ferri, " 1-4 gr. }
*Iodide of Iron (Blancard's formula)....1 gr.
Iodoform....1 gr.
Iodoform and Iron....2 grs.
Ipecac & Opium (Dover's Powder, U.S.) 2½ grs.
Ipecac & Opium (Dover's Powder, U.S.) 5 grs.
Iron by Hydrogen (Quevenne's)... 1 and 2 grs.
Iron, Citrate and Quinine....1 and 2 grs.
Iron, Proto-Carb. (Vallet's Mass.) 2 grs. & 3 grs.
Iron, Proto-Carb. (Vallet's Mass.)....5 grs.
*Iron, Proto-Chloride....1 gr.
Iron, Quinine and Strychnine....
{ Ferrum, Redactum, 1 gr.
Quiniæ, Sulphas, 1 gr.
Strychnia, 1-60 gr. }
Laxative (Cole's)....
{ Res., Podophylli, - 1-10 gr.
Hydrarg., Chlor., Mite, 1 gr.
Ext. Col. Comp., pulv., 3 grs. }
Lime, Lacto-Phosphate....5 grs.
*Mercury, Bin-Iodide....1-25 and 1-16 gr.
*Mercury, Prot-Iodide....1-5, and 1-4 gr.
Morphine, Acetate....1-8 and 1-4 gr.
*Morphine, Sulphate, 1-16, 1-10, 1-8, 1-6, 1-4 gr.
Morphine Valerianate....1-8 gr.
Neuralgia (Brown-Sequard)....
{ Ext., Hyoscyami, 2-3 gr.
" Conii, 2-3 gr.
" Ignatii Amaræ, 1-2 gr.
" Opii, 1-2 gr.
" Aconiti, 1-3 gr.
" Cannab. Indicæ, 1-4 gr.
" Stramonii, 1-5 gr.
" Belladonnæ, 1-6 gr. }
Neuralgia (Dr. Gross')....
{ Quiniæ, Sulphas, 2 grs.
Morphiæ, Sulphas, 1-20 gr.
Strychnia, 1-30 gr.
Acid Arseniosum, 1-20 gr.
Ext., Aconiti, 1-2 gr. }
Neuralgia, (Dr. Gross',) as above, without Morphine.
Nux Vomica Extract....1-2 gr.
Opium, U. S....1 gr.
*Opium Extract....1-4, 1-2 and 1 gr.
Opium and Acetate of Lead....2 grs.
{ Opii, Pulv., 1 gr.
Plumbi, Acet., 1 gr. }
Opium and Camphor....
{ Opium, 1 gr.
Camphora, 2 grs. }
Pepsin....5 grs.
Pepsin and Bismuth....5 grs.
{ Pepsin, 2 grs.
Bismuti, Sub-Nit., 3 grs. }
Pepsin, Bismuth and Strychnine....5 grs.
{ Pepsin, 2 1-2 grs.
Bismuth, Sub-Nit., 2 1-2 grs.
Strychnia, 1-60 gr. }
Phosphates Iron, Quinine and Strychnine....
{ Ferri, Phosphas., 2 grs.
Quiniæ, Phosphas, 1 gr.
Strychniæ, Phosphas, 1-60 gr. }
Phosphorus....1-100, 1-50, 1-20 and 1-12 gr.
Phosphorus Compound....
{ Phosphorus, 1-60 gr.
Ext., Nucis Vomicæ, 1-4 gr. }
Phosphorus Compound....
{ Phosphorus, 1-100 gr.
Ext. Nucis Vomicæ, 1-4 gr. }
Phosphorus Compound and Iron....
{ Phosphorus, 1-100 gr.
Ferri, Phosphas, 1-2 gr.
Ext., Nucis Vomicæ, 1-3 gr. }
Podophyllin....1-4, 1-2 and 1 gr.
Podophyllin Compound....
{ Podophyllin, 1-2 gr.
Ext., Hyoscyami, 1-8 gr.
Ext., Nucis Vomicæ, 1-16 gr. }
Podophyllin and Blue....
{ Podophyllin, 1-2 gr.
Pil., Hydrarg., 2 1-2 grs. }
Podophyllin, Capsicum and Belladonna....
{ Podophyllin, 1-4 gr.
Ext., Bellad. Alc., 1-8 gr.
Pulv., Capsici, 1-2 gr. }
Podophyllin, Ext., Coloc. and Belladonna....
{ Podophyllin, 1-2 gr.
Ext., Coloc. Comp., 2 grs.
" Belladon., 1-4 gr. }
*Quinine, Carbolate....1 gr.
*Quinine, Salicylate....1 gr.
*Quinine, Sulphate & Bi-Sulphate, 1-4 & 1-2 gr.
Quinine, Sulphate and Bi-Sulphate....1 gr.
Quinine, Sulphate and Bi-Sulphate....1½ grs.
Quinine, Sulphate and Bi-Sulphate....2 grs.
Quinine, Sulphate and Bi-Sulphate....3 grs.
Quinine, Sulphate and Bi-Sulphate....4 grs.
Quinine, Sulphate and Bi-Sulphate....5 grs.
*Quinine, Sulpho-Carbolate....1, 2 and 3 grs.
Quinine and Aloes....1 gr.
{ Quiniæ, Sulphas, 3-4 gr.
Pulv., Aloes, Soc., 1-4 gr. }
Quinine, Arsenic and Nux Vomica....
{ Quiniæ, Sulphas, 1 gr.
Acid, Arseniosum, 1-60 gr.
Ext., Nucis Vomicæ, 1-4 gr. }
Quinine and Iron....
{ Quiniæ Sulphas, 1 gr.
Ferrum Redactum, 1 gr. }
Quinine and Carbonate Iron,....
{ Quiniæ, Sulphas, 1 gr.
Ferri, Sub. Carb, 2 grs. }
Quinine, Phosphorus and Nux Vomica....
{ Quiniæ, Sulphas, 1 gr.
Phosphorus, 1-60 gr.
Ext., Nucis Vomicæ, 1-40 gr. }
Quinine, Phosphorus and Nux Vomica....
{ Quiniæ, Sulphas., 1 gr.
Phosphorus, 1-60 gr.
Ext., Nucis Vomicæ, 1-4 gr. }
Quinine Compound....
{ Quiniæ, Sulphas, 1 gr.
Ferrum, Redact., 1 gr.
Acid, Arseniosum, 1-32 gr. }
Quinine Compound and Extract Dandelion....
{ Quiniæ, Bi-Sulph., 1 1-4 grs.
Ferri, Sulph., Exsic., 2 grs.
Acid, Arseniosum, 1-24 gr.
Extract, Taraxici, 1 1-4 grs. }
Quinine Compound and Strychnine....
{ Quiniæ, Sulphas., 1 gr.
Ferrum, Redactum, 1 gr.
Strychnia, 1-20 gr.
Acid, Arsenosum, 1-20 gr. }
Quinine, Valerianate....1-2 gr.
Rheumatic....
{ Ext., Coloc. Comp., 1 1-2 grs.
Ext., Colch. Acet., 1 gr.
Ext., Hyoscyami, 1-3 gr.
Hydr., Chlor., Mite, 1-3 gr. }
Rhubarb, U. S....
Rhubarb Compound, U. S....
Santonin....1 gr.
Santonin and Calomel....
{ Santonin, 1 gr.
Calomel, 1 gr.
Chocolate. }
*Sodium, Salicylate....5 grs.
Strychnine....1-60, 1-40 and 1-30 gr.
*Strychnine Compound....
{ Strychnia, 1-100 gr.
Phosphorus, 1-100 gr.
Ext. Cannab. Indic., 1-16 gr.
Ginseng, 1 gr.
Ferri, Carb., 1 gr. }
*Sulphur, Iodide....1-25 and 1-10 gr.
*Sumbul, Extract....1 gr.
Syphilitic (Ricord's modified)....
{ Hydr. Prot-Iodide, 1-2 gr.
Lactucarium, - 1-2 gr.
Ext., Opii, - - 1-10 gr.
Ext., Cicutæ, - 1½ grs. }
Tonic (Dr. Aiken)....
{ Quiniæ, Sulph., 1 gr.
Acid, Arseniosum, 1-50 gr.
Ferrum, Redactum, 2-3 gr.
Strychnia, 1-50 gr. }
Triplex....
{ Extract Aloes, 2 grs.
Podophyllin, 1-2 gr.
Pil., Hydrarg., 1-2 gr. }
Triplex (Dr. Francis)....
{ Pulv., Aloes, Soc. Pil., Hydrarg.
Pulv., Scammonii. Ol., Tigli.
Pulv., Myrrhæ. Ol., Carui. }
Valerian Extract....3 grs.
*Zinc, Phosphide....1-6, 1-4 and 1-2 gr.
*Zinc, Phosphide and Ext. Nux Vomica....
{ Zinci, Phosphuretum, 1-10 gr.
Ext., Nucis Vomicæ, 1-4 gr. }
Zinc, Valerianate....1 gr.

RECENT ADDITIONS TO LIST.

Aconitia....1-60 gr.
Blue Pill Compound....
{ Pil. Hydrarg., 1 gr.
Pulv. Opii., 1-2 gr.
Pulv. Ipecac., 1-4 gr. }
Blue Pill, U. S....1-2 gr.
Caffeia, Citrate....1 gr.
Cinchona Bark Alkaloids....
{ Quiniæ Sulph., 1-2 gr.
Quinidiæ Sulph., 1-2 gr.
Cinchoniæ Sulph., 1-2 gr.
Cinchonidiæ Sulph., 1-2 gr. }
Cinchonidia Sulphate....5 grs.
Codeia....1-16 and 1-5 gr.
Hydrastia (White Alkaloid)....1-2 and 1 gr.
Jaborandi Extract....3 grs.
Ox Gall Comp....3 grs.
{ Fel Bovin. dep., 2 grs.
Pulv. Zingiber, 1 gr. }
Phosphorus, Iron and Quinine....
{ Phosphorus, 1-100 gr.
Ferri Carb. (Vallet's), 1 gr.
Quiniæ Sulph., 1 gr. }
Phosphorus, Iron, Quinine and Nux Vomica..
{ Phosphorus, 1-100 gr.
Ferri Carb. (Vallet's) 1 gr.
Quiniæ Sulph., 1 gr.
Ext. Nucis Vomicæ, 1-2 gr. }
Piperin Compound....
{ Piperin, 1-4 gr.
Hydr. Chlor. Mite, 1-4 gr. }
Podophyllin....1-8 gr.
Podophyllin and Leptandrin....
{ Podophyllin, 1-2 gr.
Leptandrin, 1 gr. }
Poke Root Compound....
{ Ext. Phytolaccæ, Alc., 2 grs.
Ext. Stillingiæ, " 1 gr.
Ext. Stramonii, " 1-8 gr. }
Potassium, Bromide....2 and 5 grs.
Quinine Sulpho-Carbol....5 grs.
Quinine and Strychnine....
{ Quiniæ Sulph., 1 gr.
Strychnia, 1-60 gr. }
Quinine, Iron and Nux Vomica....
{ Quiniæ Sulph., 1 gr.
Ferri Carb. (Vallet's), 2 grs.
Ext. Nucis Vom., 1-4 gr. }
Salicin....2 1-2 and 5 grs.
Salicylic Acid with Morphine....
{ Acid Salicylicum, 2 1-2 grs.
Morphiæ Sulphas, 1-12 gr. }
Salicylic Acid with Morphine....
{ Acid. Salicylicum, 5 grs.
Morphiæ Sulphas, 1-8 gr. }
Sandal Wood Extract (McK. & R.)....2 grs.
Tartar Emetic....1-100, 1-20 and 1-4 gr.

The coating, not being porous, will protect such preparations as Phosphorus and Iron Compounds better than Sugar.

QUININE PILLS.

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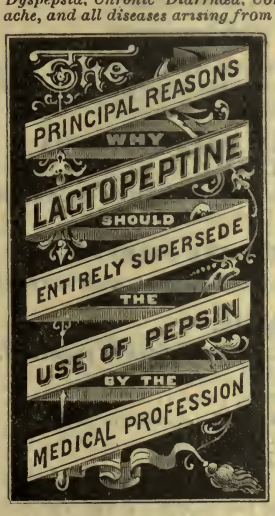

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